



BOARD OF TRUSTEES
February 15, 2022
5:30 PM

Leeper Center, 3800 Wilson Avenue, Wellington, CO

Work Session Agenda

The Zoom details below are for online viewing and listening only.

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Passcode: 871952

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A. ITEMS

1. Draft Land Use Code Updates
Joint Presentation with Board of Trustees and Planning Commission
 - Presentation: Cody Bird, Planning Director
2. Wastewater Treatment Plant CMAR Contract Amendment for Guaranteed Maximum Price (GMP) - Discussion
 - Presentation: Dave Myer, Engineer
3. General Fund Transfers to Water Fund and Sewer Fund; Budget Reductions
 - Presentation: Patti Garcia, Town Administrator
4. Board Outreach and Discretionary Funds Discussion
 - Presentation: Patti Garcia, Town Administrator
5. Finance Committee - Presentation of Options
 - Presentation: Patti Garcia, Town Administrator

The Town of Wellington will make reasonable accommodations for access to Town services, programs, and activities and special communication arrangements. Individuals needing special accommodation may request assistance by contacting at Town Hall or at 970-568-3380 ext. 110 at least 24 hours in advance.



Board of Trustees Meeting

Date: February 15, 2022
Submitted By: Cody Bird, Planning Director
Subject: Draft Land Use Code Updates
Joint Presentation with Board of Trustees and Planning Commission

- **Presentation: Cody Bird, Planning Director**

EXECUTIVE SUMMARY

The Planning Commission adopted the Wellington Comprehensive Plan on August 2, 2021. The Comprehensive Plan provides the long-range vision and recommendations for the growth and development of the Town and is the basis for zoning, subdivision regulations and other land use codes. The Town is now evaluating and updating the Town's land use codes to reflect the recommendations of the Comprehensive Plan and to bring the land use codes into compliance with recent changes to State statutes and other regulatory requirements. Additional considerations also include updates to reflect emerging technologies, changes in development practices, water conservation needs and more.

The Planning Commission has been working on the draft land use code in sections for several months. The complete first draft was compiled and presented to the Planning Commission at the February 7 work session. The Board of Trustees is also being presented the first draft in a joint work session with the Planning Commission to consider and discuss the initial recommendations. Following discussion and revisions, the draft will again be presented to the Planning Commission and a public hearing on the draft land use code will be conducted. Following the Planning Commission hearing, the Commission will forward recommendations to the Board of Trustees, and the Board will also conduct a public hearing. The result of the public hearings, public comments, and making necessary revisions is anticipated to result in the eventual adoption of the Land Use Code.

The Complete Draft 1 attached with this report is intended to capture the recommendations that resulted from the Planning Commission's work sessions, as well as feedback from stakeholders, industry professionals and Town staff. Additional revisions will be necessary, and this draft document is expected to change with continued input from the Planning Commission, Board of Trustees and public comments. Public comment is encouraged during this period to help guide the review and adoption process. The draft chapters of the land use code are available on the Town's website. Comments can be provided by submitting the comment form on the Land Use Code project page of the Town's website (<http://www.wellingtoncolorado.gov/497/Land-Use-Code>).

Work sessions are for general presentation and discussion, but no action will be taken.

BACKGROUND / DISCUSSION

STAFF RECOMMENDATION

ATTACHMENTS

1. Summary of Proposed Changes
2. Land Use Code Draft 1
3. Draft Landscape and Irrigation Manual



4. Presentation

Wellington Land Use Code Update

EXECUTIVE SUMMARY OF CHANGES

OVERALL REORGANIZATION OF ANNEXATION, ZONING, AND SUBDIVISION REGULATIONS

Chapters 15, 16, and 17 of the Municipal Code currently contain the Annexation, Zoning and Subdivision Provisions for the Town. The Land Use Code update consolidates these three chapters into a single, unified Land Use Code. The table below outlines the existing sections and how they were reorganized into the new format.

Existing Structure within the Municipal Code	Proposed Structure Within New Consolidated Land Use Code
Chapter 15 - Annexation	Chapter 1: General Provisions
Article 1: Annexation Procedures	Combines all general provisions
Chapter 16 - Zoning	Chapter 2: Application Procedures
Article 1: General Provisions	Combines all application procedures including annexation, subdivisions, and conditional uses
Article 2: Definitions	
Article 3: Design Standards	
Article 4: Nonconforming Uses, Buildings and Structures	Chapter 3: Zoning Districts
Article 5: Zoning Districts and Boundaries	Combines Zoning Districts & Boundaries, Density & Dimensional Standards, and Manufactured Home Park District
Article 6: Density and Dimensional Standards	Chapter 4: Use Regulations
Article 7: Conditional Uses	Combines all use regulations including Sexually Oriented Businesses, Home Occupations, Commercial Animal Establishment, Medical Marijuana Establishments, and Wireless Telecommunications
Article 8: Manufactured Home Park District	
Article 9: Recreational Vehicle Parks	
Article 10: Floodplain Regulations	
Article 11: Sexually Oriented Businesses	
Article 12: Home Occupations	Chapter 5: Development Standards
Article 13: Commercial Animal Establishments	Combines Design Standards, Sign Regulations, and design standards from Subdivisions
Article 13.5: Medical Marijuana Establishments	
Article 14: Sign Regulations	Chapter 6: Subdivision Regulations
Article 15: Vested Property Rights	Combines all articles in Chapter 17
Article 16: Wireless Telecommunication Services	Chapter 7 Nonconformities
Chapter 17 - Subdivisions	Includes provisions from Ch16 Article 4
Article 1: General Provisions	Chapter 8: Floodplain Regulations
Article 2: Types of Subdivisions	Includes provisions from Ch16 Article 10
Article 3: Major Subdivisions	Chapter 9: Definitions
Article 4: Minor Subdivisions	Combines all Definitions
Article 5: Site Plan	
Article 6: Plot Plan	



OVERVIEW OF SPECIFIC CHANGES WITHIN EACH CHAPTER

Chapter 1: General Provisions

1. Chapter 1 is largely new information clarifying the purpose, organization, authority, effective date, and applicability of the Land Use Code in addition to the relationship of the Comprehensive Plan and other ordinances to the Land Use Code.

Chapter 2: Application Procedures

1. Consolidated all application procedures from other sections into this chapter.
2. Added an overall purpose and organization section.
3. Incorporated a new table to consolidate review and decision-making authorities and identify requirements for public notice for all application types.
4. Developed a General Application Procedures section outlining the basic steps for all applications.
5. Added specific application procedures for Land Use Code Amendment, Comprehensive Plan Amendment, Rezone, Administrative Amendment, Lot Line Adjustment, Easement Adjustment, Minor Deviation, Condo/Townhome Plan, and Revised Final Plat.
6. Added specific application procedures for Appeals based on a portion of existing language in variance procedures.

Chapter 3: Zoning Districts

1. Updated purpose statements of all zone districts
2. Renamed R-1 from Single-Family Rural Density to Residential Rural Density and aligned density ranges with Comprehensive Plan recommendations.
3. Renamed R-2 from Single Family Medium Density to Residential Low Density and aligned density ranges with Comprehensive Plan recommendations.
4. Combined R-3 (Senior Housing) with R-4 (Multi-family Housing) and renamed the new zone district Residential Medium Density.
5. Defined a new R-4 zone district called Downtown Neighborhood and included design standards to reflect community feedback regarding desired architectural character.
6. Removed the Transitional Zone District to provide more certainty in those areas.
7. Moved dimensional standards tables from Article 6 into Chapter 3 to simplify formatting and combine relevant information.

Chapter 4: Use regulations

1. Combined use regulations contained in articles 9, 11, 12, 13, 13.5, and 16 into a single chapter with all other use-based regulations.

2. Combined all permitted and conditional uses listed in the current Zone District Article into an overall table showing allocation of uses by zone district.
3. Allocated each land use in the use table by land use categories.
4. Proposed new use-specific regulations to mitigate any potential adverse development impacts on surrounding properties.
5. Established sections to address temporary and accessory uses that may require additional specific regulations to minimize development impacts.
6. Reduced reliance on conditional use approvals for more consistent zoning expectation and enforcement.

Chapter 5: Development Standards

1. Combined regulations from articles 3 and 14 and design standards from the Chapter 17 (including Streets, Parks and Open Space, Landscaping, Storm Drainage Facilities, Buffering and Screening, Fences and Walls, and Lighting) into a single development standards chapter.
2. Revised the sign code to be compliant with content neutrality and First Amendment case law.
3. Revised sign types and their allocations to improve development certainty.
4. Used regional and national best practices to create context-sensitive parking regulations.
5. Minimum parking ratios provided for each land use.
6. Provided downtown specific parking approaches and options in alignment with Comprehensive Plan guidance.
7. Loading regulations provided to ensure commercial and industrial developments have adequate facilities for the loading of goods, materials, and products.
8. Strengthened lighting standards to reduce light pollution and protect dark sky preferences.
9. Landscaping regulations with the recent direction of the Wellington Waterwise Landscape and Irrigation Design Manual.
10. New graphics and tables provided throughout the chapter to improve code readability.

Chapter 6: Subdivision Regulations

1. Cleaned up language and formatting to improve readability, clarity and effect.
2. Moved application procedures to Chapter 2.
3. Moved Streets, landscaping, and transportation and connectivity to Development Standards.



4. Added clarifying language for open space dedication.

Chapter 7: Nonconformities

1. Mostly new language that clarifies certain development situations prior to the effective date of the Land Use Code.
2. Strengthened the Town's limited existing nonconformity regulations to allow the Town to better address nonconformities.

Chapter 8: Floodplain Regulations

1. Kept the bulk of the original language as it is required to meet state and federal standards.
2. Cleaned up formatting for ease of use.

Chapter 9: Definitions

1. Removed irrelevant terms.
2. Updated outdated terms.
3. Add new terms relevant to new language.
4. Removed any standards that were buried in definitions.

CHAPTER 1: GENERAL PROVISIONS

1.01 Purpose and Organization

1.01.1 Purpose. The purpose of this Land Use Code is to create a vital, cohesive, well-designed community in order to enhance the Town's small-town character and further the residents' goals as identified in the Comprehensive Plan. These zoning regulations are designed to:

- A. Promote the health, safety, values, and general welfare of Town residents. (Ord. 11-2007 §1)
- B. Establish a variety of zoning district classifications according to the use of land and buildings with varying intensities of uses and standards whose interrelationships of boundary zones form a compatible pattern of land uses and buffer areas which enhance the value of each zone.
- C. Ensure adequate provision of transportation, water supply, sewage disposal, schools, parks, and other public improvements.
- D. Regulate and restrict the location, use, and appearance of buildings, structures and land for residence, business, trade, industry, or other purposes, including federal requirements pertaining to floodplains.
- E. Regulate and restrict the height, number of stories and size of buildings and structures including their distance from any street or highway; the percentage of each lot that may be occupied by buildings and other structures; and size of yards, courts, and other open spaces.
- F. Promote good design and arrangement of buildings or clusters of buildings and uses in residential, business, and industrial development.
- G. Encourage innovative and quality site planning, circulation on and transportation to sites, architecture and landscaping that reflect land development best practices.
- H. Prevent the overcrowding of land; poor quality development; waste and inefficiency in land use; danger and congestion in travel and transportation and any other use or development that might be detrimental to the stability and livability of the Town.
- I. Encourage the redevelopment, infill, and renewal of developed spaces in a manner that protects the Town's existing development context.
- J. Establish streets and availability of active transportation routes that promote walking, bicycling, and other active transportation forms that create safe and viable options for all.
- K. Establish regulations that promotes adequate light and air, maintains acceptable noise levels, and conserves energy and natural resources.

1.01.2 Organization. The Wellington Land Use Code is organized into nine (9) chapters as follows:

- Chapter 1 General Provisions – The General Provisions address the Land Use Code’s organization, its purpose and authority, rules for interpretation, and legal provisions.
- Chapter 2 Application Procedures – The Application Procedures guides the reader through the procedural and decision-making process by providing divisions pertaining to general procedural requirements and a common development review process, as well as providing a separate division for each type of development application and other land use requests.
- Chapter 3 Zoning Districts – All zone districts within the Town of Wellington and their respective list of permitted uses, prohibited uses and particular development standards are located in Chapter 4 Use Regulations and Chapter 5 Development Standards.
- Chapter 4 Use Regulations – The Use Regulations identifies permitted and prohibited use allowances for their respective zoning districts, while also providing use-specific standards that meet certain development needs.
- Chapter 5 Development Standards – The Development Standards establish standards which apply to all types of development applications unless otherwise indicated. This chapter is divided into sections addressing standards for site planning and design, engineering, environmental and cultural resource protection, buildings, and transportation.
- Chapter 6 Subdivision Regulations – The Subdivisions Regulations establish the Town’s land division requirements.
- Chapter 7 Nonconforming Uses – The Nonconforming Uses protects and regulates nonconforming uses, structures, lots, site improvements, and applications (referred to collectively as “nonconformities”) and specifies the circumstances and conditions under which those nonconformities may continue.
- Chapter 8 Floodplain Regulations – The Floodplain Regulations address the Town’s development and planning measures to mitigate for potential flood hazards.
- Chapter 9 Definitions – The Definitions encompass the terms used throughout the Land Use Code.

1.01.3 Organizational Method. This method of organization provides a user-friendly and easily accessible Land Use Code by consolidating most town regulations addressing land use and development, standardizing the regulatory format, providing common development review procedures, separating and clarifying standards, and maintaining definitions.

1.02 Authority

- A. This Land Use Code is adopted pursuant to the authority contained in the Colorado Revised Statutes (C.R.S.). Local governments are provided broad authority to plan for and regulate the use of land within their jurisdictions, as authorized in Title 29, Article 20, et seq. and Title 31, Article 23, et seq. of the C.R.S., as amended. Additional statutory authority may also exist for specific types of development regulation.

- B. Whenever a section of the Colorado Revised Statutes cited in this Land Use Code is later amended or superseded, this Land Use Code shall be deemed amended to refer to the amended section or section that most nearly corresponds to the superseded section.

1.03 Effective Date

This Land Use Code is effective immediately upon approval of the Board of Trustees.

1.04 Applicability

1.04.1 Generally. Unless otherwise provided, this Land Use Code applies to any:

- A. Development or redevelopment of land;
- B. New building or use;
- C. Addition or enlargement of an existing building or use;
- D. Change in occupancy of any building; or
- E. Change of use.

1.04.2 Applications. Unless otherwise provided, this Land Use Code applies to any of the following development applications:

- A. Any subdivision plat;
- B. Any site plan;
- C. Any plot plan;
- D. Any land entitlement process plan;
- E. Any special use authorization;
- F. Any conditional use review;
- G. Any building permit for a use other than a single-family detached dwelling; or
- H. Any certificate of occupancy.

1.05 Relationship to Other Ordinances

The standards of this Land Use Code are in addition to all other standards, guidelines, policies, and Municipal Code requirements otherwise applicable to land use and development. To the extent that there is a conflict between a requirement of this Land Use Code and another Town standard, guideline, policy or requirement, refer to *Chapter 1.07 Interpretation and Conflicting Provisions*.

1.06 Relationship to Comprehensive Plan

The adopted Wellington Comprehensive Plan is the official policy document of the Town of Wellington. This provides a consistent statement of the Town's plan and policies for future development to bring

about the Town's vision for the future. This Land Use Code implements the policies established in the comprehensive plan.

1.07 Interpretation and Conflicting Provisions

1.07.1 Interpretation. In their interpretation and application, the provisions of these zoning regulations shall be held to be minimum requirements adopted for the promotion of the public health, safety, values, convenience, comfort, prosperity, and general welfare. (Ord. 11-2007 §1)

1.07.2 Conflicting Provisions.

- A. Conflict with Other Provisions of Law. Whenever the requirements of this Land Use Code are at a variance with the requirements of any other lawfully adopted rules, regulations, or ordinances, the more restrictive or that imposing the higher standards shall govern. (Ord. 11-2007 §1)
- B. Conflict with Private Covenants or Deeds. In case of a conflict between this Land Use Code and any private restrictions imposed by covenant or deed, the responsibility of the Town shall be limited to the enforcement of this Land Use Code. When provisions within this Land Use Code are more restrictive than those imposed by covenant or deed, or when any such private instruments are silent on matters contained within this Land Use Code, the provisions of this Code shall rule. (Ord. 11-2007 §1)

1.08 Transition from Prior Regulations

A development application for approval, including the approval, conditional approval, or denial of approval of that plan, shall be governed only by the duly adopted laws and regulations in effect at the time the complete application is submitted.

1.09 Application Fees

1.09.1 Generally.

- A. All fees assessed pursuant to this Land Use Code are non-refundable.
- B. Any property owner submitting a development application is responsible for paying all costs and fees incurred by the Town in reviewing and processing that application, including, but not limited to: attorney fees; engineering fees; surveying fees; consulting fees; recording fees; and legal publications and notice expenses.
- C. Final approval of any application submitted pursuant to this Land Use Code shall be contingent upon payment of all fees and expenses to the Town. The Town is not obligated to record documents, issue building permits or process any applicant submittals until all outstanding costs and fees have been paid.
- D. If the Town must pursue collection of an applicant's outstanding fees or costs, it is the applicant's responsibility for the payment of all attorney fees and costs incurred by the Town in such collection

efforts. The Town reserves the right to suspend an application, withhold approval or postpone public hearings if an applicant fails to pay any fee due under this Land Use Code. In addition to any other remedy available, any delinquent charges due under this Land Use Code may be certified to Larimer County and collected in the same manner as municipal taxes.

1.10 Review and Decision Making Bodies

This Land Use Code uses the review and decision making bodies established in *Chapter 2 Administration of the Wellington Municipal Code* to make development application decisions.

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CHAPTER 2: APPLICATION PROCEDURES

2.01 Purpose and Organization

2.01.1 Purpose. This chapter describes the review procedures for land use applications and development activity in the Town of Wellington (the Town). This chapter ensures consistency and efficiency in the administration of the Town's land use regulations.

2.01.2 Organization. This chapter is organized into the following sections:

- 2.02 – Public Notice
- 2.03 – Procedures Table
- 2.04 – General Application Procedures
- 2.05 – Land Use Code Amendment
- 2.06 – Comprehensive Plan Amendment
- 2.07 – Rezone
- 2.08 – Administrative Adjustment
- 2.09 – Lot Line Adjustment
- 2.10 – Easement Adjustment
- 2.11 – Minor Deviation
- 2.12 – Site Plan
- 2.13 – Plot Plan
- 2.14 – Conditional Use Application
- 2.15 – Minor Subdivisions
- 2.16 – Major Subdivisions
- 2.17 – Planned Unit Development
- 2.18 – Condominium/Townhome Plat
- 2.19 – Revised Final Plat
- 2.20 – Annexation
- 2.21 – Variance
- 2.22 – Appeals
- 2.23 – Special Review

2.02 Public Notice and Public Hearing

Public Notice

2.02.2 **Generally.** For every public hearing required by the Land Use Code, the Town shall notify the public of the date, time, and place of that hearing; the address and legal description of the property involved; the purpose of the hearings; the right of interested persons to appear and be heard; the name of the applicant; and where additional information may be obtained by:

- A. *Published Notice.* Notice shall be published once in a newspaper published with general circulation in the Town at least 15 days prior to all hearings, except for annexation hearings. Noticing requirements apply to each subsequent hearing.
- B. *Written Notice.* Written notice shall be mailed at least 30 days prior to the hearing to all property owners of record, as recorded at the office of the Larimer County assessor, of properties within 500' of the subject property. The applicant is responsible for the list of names and addresses of owners as they appear in the records of the County Clerk and Recorder. The Town will verify the list of names and addresses prior to noticing.
 - 1. Written notice shall be mailed first-class postage, except subdivision review which shall be by certified mail.
 - 2. The applicant is responsible for obtaining the list of owners and providing it to the Planning Director or designee with the application submittal.
- C. *Posted Notice.*
 - 1. Notice shall be posted at the Town's designated official posting locations referenced at the Town's website (cite website location), at least five days prior to the hearing.
 - 2. Posting notice on the subject property on a sign approved by the Town of Wellington at least 15 days prior to the hearing. Location approval is required prior to sign placement.

2.02.3 **Computation.** In computing a period of days, the first day is excluded and the last day is included. If the last day of any period is a Saturday, Sunday, or legal holiday, the period is extended to include the next day which is not a Saturday, Sunday, or legal holiday.

Public Hearing

2.02.4 **Generally.**

- A. All required public hearings shall comply with the procedures adopted by the Town.
- B. The decision-maker conducting the public hearing shall record the public hearing by any appropriate means. A copy of the public hearing may be acquired by any person upon application to the Planning Director or designee and payment of a fee to cover the cost of duplication.

2.02.5 **Hearing Continuations.** The Town Board, Planning Commission, or Board of Adjustment may continue the hearing to a subsequent meeting at a certain date and time or may close the hearing and continue the meeting to deliberate the issues until a final decision is made.

If a hearing is continued to a certain date and time, no further notice of a continued hearing or meeting need be published.

2.03 Procedures Table

2.03.2 Overview. The following table summarizes the major review procedures for land use applications and development activity in the Town of Wellington. Not all procedures addressed in this chapter are summarized in this table (see subsequent sections of this chapter for additional details on each procedure).

Application Type	Pre-application Conference Required Y = Yes O = Optional	Authority		
		Staff Review	Planning Commission	Town Board
			R= Recommendation D = Decision	
Entitlements				
Amendment	O	R	R	D
Rezone	Y	R	R	D
PUD	Y	R	R	D
Conditional Use	Y	R	R	D
Annexation	Y	R	R	D
Variance	Y	R	R	D
Special Review	Y	D	--	--
Plans				
Site Plan	Y	R	D	--
Plot Plan	O	D	--	--
Administrative				
Administrative Adjustment	Y	D	--	--
Lot Line Adjustment	Y	D	--	--
Easement Adjustment	Y	D	--	--
Minor Deviation	Y	D	--	--
Plats				
Major Subdivision				
Preliminary Plat	Y	R	R	D
Final Plat	O	R	R	D
Minor Subdivision	Y	R	R	D
Revised Final Plat	Y	D	--	--
Condominium/Townhome Plat	Y	D	--	--

2.04 General Application Procedures

General Review Procedures

2.04.2 **Purpose.** This section outlines the general application procedures and review process for all land use applications.

2.04.3 **Applicability.** This section applies to all land use applications unless an exception to the general procedures is expressly identified in subsequent sections of this chapter.

2.04.4 **Procedure.**

A. *Pre-application Meeting.*

1. Intent. The pre-application conference provides an opportunity for an informal review of an application, and discusses the submittal requirements, development standards, schedule, and approval criteria. The pre-application meeting is not a formal review of the application. The guidance and feedback provided during the pre-application meetings are not considered binding upon the application, applicant, or the Town.
2. Standards.
 - a. The applicant shall request in writing, on the official form provided by the Town, a pre-application meeting with the Planning Director or designee. The applicant shall provide the required information as deemed necessary by the Planning Director or designee to conduct an informal review of the proposed development at least 10 business days in advance of a pre-application meeting.
 - b. A pre-application conference shall be held within 30 days of receipt of all necessary information unless a later date is agreed to by the applicant and the Planning Director or designee.
 - c. The Planning Director or designee may waive the pre-application meeting requirement if determined that the request does not warrant review prior to application.

B. *Land Use Application Submittal.*

1. Intent. The intent of the land use application is to formally review an application.
2. Standards. Application submittals shall be made on a form provided by the Town and accompanied by all required submittal documents and supporting information identified on the application, checklist and as discussed in the pre-application conference.
 - a. The applicable land use application fees shall be paid at the time of submittal of any land use application.
 - b. Unless otherwise specified in this Land Use Code, applications for review and approval may be initiated by:
 - i. The owner of the property that is subject to the application;
 - ii. The property owner's authorized agent, representative, or contract purchaser; or

- iii. Any review or decision-making body for the Town.
 - c. If an authorized agent or representative files an application under this Land Use Code on behalf of the property owner, the representative shall provide the Town with written, notarized documentation that the owner has authorized the filing of said application.
 - d. If a review or decision-making body initiates action under this Land Use Code, it shall do so without prejudice toward the outcome.
- 3. Filing Fees. Application filing fees are set by the Town Board by resolution and may be reviewed and updated from time-to-time. Applications will not be processed until fees are paid in full. The fees paid are not refundable in whole or in part for applications withdrawn by an applicant unless recommended by the Planning Director and approved by the Town Administrator. All or a portion of the fees may be refunded depending on the amount of review and processing time already incurred by the Town.
- 4. Additional Fees. If the Town Manager determines that additional funds are needed to complete the application review, including retention of outside professional services, the Town Manager may impose additional application fees, to recover the Town's actual costs in completing review.
 - a. The applicant shall be billed by the Town for all additional costs and any other fees incurred by the Town on a as needed basis per the Town's D-5 form;
 - b. Costs shall be a lien upon the property, and the Town reserves the right to stop work on a project and/or withhold approvals and permits if costs are not paid within 30 days after written notice. For withdrawn applications, any unused deposit shall be returned to the applicant within 60 days less any incurred "pass through" costs, as of the date of the formal withdrawal request.
- C. *Completeness Determination.*
 - 1. Following receipt of a development application, the Planning Director or designee shall certify that the development application submittal is complete.
 - 2. If the application is determined to be incomplete, the Planning Director or designee shall return the application to the applicant and provide a statement in writing specifying the additional information required. No further review activities will proceed until a completed application is accepted. Returned applications that are not resubmitted and accepted within 60 days shall be determined to be abandoned and of no further effect. A new application may be submitted, including applicable fees.
- D. *Application Review and Preparation of a Staff Report.*
 - 1. Following a completeness determination, the Planning Director or designee circulates the application to staff and appropriate referral entities for review.

2. The Planning Director or designee may also refer applications to other boards, commissions, government agencies, and non-governmental agencies not referenced in this chapter.
 3. The Planning Director or designee may request a meeting with the applicant to discuss the application and any written comments. Based on the written comments, the applicant may request an opportunity to revise the application prior to further processing. Additional submittals and review may be subject to additional fees, as determined by the Planning Director or designee.
 4. If the application requires review and approval by the Planning Commission or Town Board, the Planning Director or designee shall prepare a staff report once written comments have been adequately addressed. The staff report shall be made available to the applicant and the public, prior to the scheduled hearing on the application. The staff report shall indicate if the application complies with all applicable standards of this Land Use Code.
- E. *Public Notice*. Public noticing requirements, when required, must meet the requirements established in Section 2.02.
- F. *Public Hearings*. Public hearing requirements, when required, must meet the requirements established in Section 2.02.3.
- G. *Final Approvals*.
1. Decision. After consideration of the application, the staff report, comments received by the public and other reviewers, and the public hearing, the decision-making body shall either approve, approve with conditions, or deny the application based on the applicable approval criteria. Written notification of the decision shall be provided by the Planning Director or designee to the applicant within 10 business days following the decision and shall become part of the public record. All decisions shall include:
 - a. A clear written statement of approval, approval with conditions, or denial (whichever is appropriate); and
 - b. A clear statement of the basis upon which the decision was made, including specific findings of fact with reference to the relevant standards.
 2. Approval Criteria. The decision-making body shall find that the application complies with all applicable standards of the Land Use Code and applicable approval criteria.
 3. Conditions of Approval. The decision-making body may approve the application with conditions as necessary to bring the proposed development into compliance with this Land Use Code or other regulations, or to mitigate the impacts of that development to the surrounding properties and streets.
 - a. All conditions of approval shall be reasonably related to the anticipated impacts of the proposed development or use or shall be based upon standards duly adopted by the Town.

- b. Any condition of approval that requires an applicant to dedicate land or pay money to a public entity in an amount that is not calculated according to a formula applicable to a broad class of applicants shall be roughly proportional in nature and extent to the anticipated impacts of the proposed development, as shown through an individualized determination of impacts.
- c. Unless otherwise provided in this Land Use Code, any representations of the applicant in submittal materials or during public hearings shall be binding as conditions of approval.

H. *Post Decision Actions.*

1. Modification or Amendment of Approval. Unless otherwise permitted in this Land Use Code, any modification of approved plans, permits, or conditions of approval shall require a new application to be submitted and reviewed in accordance with the full procedure and fee requirements applicable to the application type.
2. Recording of Decisions. Once approved, the resolution, ordinance, or notice of decision shall be filed with the Town Clerk and recorded in the Office of the Larimer County Clerk and Recorder at the expense of the applicant.
 - a. For applications approved by the Planning Director or designee or Planning Commission, a notice of land use decision shall be issued by the Planning Director or designee or Town Clerk.
 - b. For applications approved by the Town Board, an ordinance or resolution shall be issued as determined by application type.
3. Lapse of Approval. Application approval shall be valid for a period of one year from the date of approval. Unless otherwise noted, authority to grant extensions shall reside with the decision-making body that granted the original approval. Extensions to the approval time frames may be granted only when all the following conditions have been met:
 - a. The provisions of this Land Use Code expressly allow the extension;
 - b. An extension request must be filed 10 days prior to the lapse-of-approval deadline with adequate justification; and
 - c. Any applicable conditions of approval have been met.
4. Revocation. Application approval may be revoked or suspended upon finding that the use, building, or site for which the permit was issued is substantially different than what was represented in the application or that one or more of the conditions or requirements contained in the application approval has been violated.
5. Denial and Reapplication. No application that is substantially similar shall be submitted within a period of one year.

- I. *Effect of Inaction.* If a review or decision-making body fails to take action on an application within the specified timeframe, such inaction shall be deemed a denial of the application unless the decision-making body grants an extension.

Administrative Review Procedures.

2.04.5 **Purpose.** This section outlines the review process for all administrative land use applications which do not require a public hearing.

2.04.6 **Applicability.** This section applies to all administrative land use applications not requiring a public hearing unless an exception is expressly identified in subsequent sections of this chapter.

2.04.7 **Procedure.**

- A. *Pre-application Meeting.* Same as referenced in Section 2.04.3.
- B. *Land Use Application Submittal.* Same as referenced in Section 2.04.3.
- C. *Application Fees.* Same as referenced in Section 2.04.3.
- D. *Completeness Determination.* Same as referenced in Section 2.04.3.
- E. *Application Review.* Same as referenced in Section 2.04.3.
- F. *Final Approvals.*
 1. Decision. After consideration of the application, the Planning Director or designee shall either approve, approve with conditions, or deny the application based on the applicable approval criteria. Written notification of the decision shall be provided by the Planning Director or designee to the applicant following the decision.
 - a. All decisions shall include a clear written statement of approval, approval with conditions, or denial (whichever is appropriate).
 - b. A clear statement of the basis upon which the decision was made, including specific findings of fact with reference to the relevant standards shall be provided to the applicant and included in the public record.
 2. Approval Criteria. The Planning Director or designee shall find that the application complies with all applicable standards of the Land Use Code and applicable approval criteria.
 3. Conditions of Approval. The Planning Director or designee may approve the application with conditions as necessary to bring the proposed development into compliance with this Land Use Code or other regulations, or to mitigate the impacts of that development to the surrounding properties and streets.
 - a. All conditions of approval shall be reasonably related to the anticipated impacts of the proposed development or use or shall be based upon standards duly adopted by the Town.

- b. Any condition of approval that requires an applicant to dedicate land or pay money to a public entity in an amount that is not calculated according to a formula applicable to a broad class of applicants shall be roughly proportional in nature and extent to the anticipated impacts of the proposed development, as shown through an individualized determination of impacts.
- c. Unless otherwise provided in this Land Use Code, any representations of the applicant in submittal materials shall be binding as conditions of approval.

G. *Post Decision Actions*. Same as referenced in Section 2.04.2

H. *Effect of Inaction*. If the Planning Director or designee fails to take action on an application within the specified timeframe of 30 days, such inaction shall be deemed a denial of the application.

Review and Decision-Making Bodies.

2.04.8 Purpose. This section outlines the review and decision-making bodies and their roles. Full duties and responsibilities for each decision-making body can be found in Sections 2.04.6 – 9 of this Land Use Code.

2.04.9 Planning Director

- A. The Planning Director or their duly authorized designee shall review and prepare a staff report for all applications requiring a public hearing. The Planning Director or designee shall also present the application and their recommendation of approval, approval with conditions, or denial at the public hearing for the application.
- B. In the event of an administrative review, the Planning Director or designee shall make the final determination of an application. Applications undergoing administrative review shall follow the procedure for administrative review outlined in section 2.04.06 the specific review procedures for the application.
- C. Decisions made by the Planning Director or designee are appealable to the Planning Commission. See Section 2.22 for appeal standards and procedure.

2.04.10 Town Planning Commission

- A. The Town Planning Commission (Planning Commission) shall review all applications at a public hearing held during a regular meeting, including the staff report, information from the applicant, and any public comment. This hearing will provide a recommendation of approval, approval with conditions, or denial to the Town Board for all applications requiring Town Board approval.
- B. All applications requiring Planning Commission review or approval shall follow the general review procedures set forth in Section 2.02 and Section 2.04.3 and the specific review procedures for the application.
- C. Decisions made by the Town Planning Commission are appealable to the Town Board. See Section 2.22 for appeal standards and procedure.

2.04.11 Town Board of Trustees

- A. The Town Board of Trustees (Town Board) shall review an application at a public hearing held during a regular meeting including the recommendation of the Planning Commission, the staff report, information from the applicant, and any public comment. This hearing will provide a final decision of approval, approval with conditions, or denial of an application.
- B. Applications requiring Town Board approval shall follow the general review procedures set forth in Section 2.02 and Section 2.04.3 and the specific review procedures for the application.
- C. Decisions made by the Town Board are appealable to the District Court. See Section 2.22 for appeal standards and procedure.

2.04.12 Town Board of Adjustment

- A. Any application obtaining Town Board approval shall follow the general review procedures set forth in Section 2.02 and Section 2.04.3 and the specific review procedures for the application.
- B. Decisions made by the Town Board of Adjustment are appealable to the District Court. See Section 2.22 for appeal standards and procedure.

2.05 Land Use Code Amendment

2.05.2 **Purpose.** The text of this Land Use Code may be amended pursuant to this section to respond to a change in conditions or public policy, or to advance the general health, safety, welfare, and morals of the Town.

2.05.3 **Applicability.** The Planning Commission or Town Board may initiate an amendment to the text of this Land Use Code. Any person may suggest to the Planning Commission that an amendment be given consideration. The Planning Director or designee shall prepare the application at the request of the Planning Commission.

2.05.4 **Procedure.** All Land Use Code amendment applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is not required for a Land Use Code amendment.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a Land Use Code amendment application shall include:
 - 1. A narrative of the proposed Land Use Code amendment;
 - 2. The existing text in the Land Use Code;
 - 3. An analysis of the proposed impact on residents, if applicable; and
 - 4. Any other information identified by the Planning Director or designee.
- C. *Review and Approval.*

1. Planning Commission Recommendation.

- a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. Staff shall present the staff report and recommendation.
- b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the amendment to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement to submit additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. A copy of the Planning Commission recommendation shall be sent to the Town Board to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the amendment at a regular meeting. Public notice shall be given pursuant to Section 2.02. Staff shall present the staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the amendment, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the amendment complies with the Town's regulations, goals, and policies.

2.05.5 Findings for Approval.

- A. The amendment is not likely to result in significant adverse impacts upon the natural environment (including air, water, noise, stormwater management, wildlife, and vegetation) or such impacts will be substantially mitigated;
- B. The amendment is necessary for the protection of health, safety, welfare, and morals of the community;
- C. The amendment is consistent with the Comprehensive Plan and the intent stated in this Land Use Code; and
- D. The amendment is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas.

2.06 Comprehensive Plan Amendment

2.06.2 Purpose. The Comprehensive Plan may be amended pursuant to this section to respond to a change in conditions or public policy, or to advance the general health, safety, welfare, and morals of the Town.

2.06.3 Applicability. The Planning Commission may initiate an amendment to the Comprehensive Plan. Any person or the Town Board may suggest to the Planning Commission that an amendment be given consideration. The Planning Director or designee shall prepare the application at the request of the Planning Commission.

2.06.4 Procedure. All Comprehensive Plan amendment applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is not required for a Comprehensive Plan amendment.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a Comprehensive Plan amendment application shall include:
 - 1. A narrative of the proposed Comprehensive Plan amendment;
 - 2. The existing text in the Comprehensive Plan;
 - 3. An analysis of the proposed impact on residents, if applicable.
- C. *Review and Approval.*
 - 1. Planning Commission Approval.
 - a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02.3. Staff shall present their staff report and recommendation.
 - b. The Planning Commission shall either approve, approve with conditions, or deny the amendment, or continue the hearing pursuant to Section 2.02.4, with the requirement to submit additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.

2.06.5 Findings for Approval.

- A. The amendment is not likely to result in significant adverse impacts upon the natural environment (including air, water, noise, stormwater management, wildlife, and vegetation);
- B. The amendment is necessary for the protection of health, safety, welfare, and morals of the community; and
- C. The amendment is consistent with the Town's goals and policies.

2.07 Rezone

2.07.2 Purpose. The boundaries of any zoning district may be changed or the zoning classification of any parcel of land may be changed pursuant to this section.

- A. The intent is to make adjustments to the official zoning map that are necessary as a result of a change in conditions or public policy, or to advance the general health, safety, welfare, and morals of the Town.
- B. A rezone is not intended to relieve particular hardships, nor confer special privileges or rights to any person or party.

2.07.3 Applicability. Rezone applications may be initiated by the Planning Commission, the Town Board, or the owner(s) of the property to be rezoned. Any person may suggest to the Planning Commission that a rezone be given consideration.

- A. A rezone application shall not be made when a variance, or administrative adjustment could be used to achieve the same result.
- B. Changes to the standards or characteristics of zoning districts (such as floor area ratio or setbacks) shall be processed as text amendments to the Land Use Code.

2.07.4 Procedure. All rezone applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is required for a rezone application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a rezone application shall include:
 - 1. A site plan depicting the property lines, location of existing buildings, parking, utilities and easements, and any other details required to demonstrate rezone request;
 - 2. A written narrative justifying why the proposed zoning fits in with the surrounding neighborhood and is more appropriate for the property than the existing zoning;
 - 3. A list of all property owners within 500’;
 - 4. A map showing all zoning districts within 500’;
 - 5. Proof of ownership or a letter of authorization from the owner; and
 - 6. Any other information identified in the pre-application meeting.
- C. *Review and Approval.*
 - 1. Planning Commission Recommendation.
 - a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present the staff report and recommendation.
 - b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information

necessary to determine whether the application complies with the Town's regulations, goals, and policies.

- c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative shall be present at the meeting to present the proposal. Staff shall present the staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of and inseparable from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

D. Post Decision Actions. Same as referenced in Section 2.04.3, General Application Procedures in addition to the following: Is the protest petition post-decision if the Town Board hasn't voted yet?

1. Protests. A protest against a rezone application must be submitted to the Town Clerk at least 14 days before the Town Board's vote on the rezone application.
2. If a valid protest is submitted, the amendment shall only become effective upon approval by three-fourths of the entire membership of the Board, whether present or not. For a protest to be valid, it must be signed by either:
 - a. The owners of 20% or more of the area included in the proposed rezone application; or
 - b. The owners of 20% or more of the land within 500 feet of the land included in the proposed rezone application.
- c. Add specifics about criteria for consideration.

2.07.5 Findings for Approval.

- A. The rezone is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The rezone is consistent with the stated intent of the proposed zoning district(s);
- C. The rezone will not result in adverse impacts to the natural environment (including air, water, noise, stormwater management, wildlife, and vegetation) or such impacts will be mitigated;

- D. The rezone of the subject property will not result in material adverse impacts to the surrounding properties;
- E. Facilities and services (roads, transportation, water, gas, electricity, police, fire protection, and sewage and waste disposal) are available to serve the subject property while maintaining adequate levels of service to existing development; and
- F. The rezone is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for those areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.08 Administrative Adjustment

2.08.2 **Purpose.** This Section allows for greater flexibility as necessary without requiring a formal zoning amendment, Land Use Code amendment, or variance. The administrative adjustment procedure is not intended to serve as a waiver of Land Use Code standards or to circumvent the variance procedure.

2.08.3 **Applicability.** The administrative adjustment procedure allows for minor modifications or deviations from the dimensional or numeric standards of The Land Use Code up to 10% with approval by the Planning Director or designee.

- A. Changes to the following standards cannot be approved through the administrative adjustments procedure and must be approved through the original application process.
 - 1. Deviations from the dimensional or numeric standards beyond 10%;
 - 2. Amendments to approved Planned Unit Developments;
 - 3. Conditions of approval;
 - 4. An increase in the overall project density or floor area;
 - 5. A change in permitted use intensity;
 - 6. A deviation from the use-specific standards;
 - 7. A change to a development standard already modified through a separate administrative adjustment or variance;
 - 8. Building materials or aesthetic elements; or
 - 9. Requirements for public roadways, utilities, or other public infrastructure or facilities.

2.08.4 **Procedure.** All applications for administrative adjustments shall comply with the following specific procedures in addition to the administrative review procedures set forth in Section 2.04.6.

- A. *Pre-application Conference*. A pre-application conference is required for an administrative adjustment application to discuss specific application procedures, criteria and requirements for a formal application.
- B. *Land Use Application Submittal*. In addition to the requirements set forth in Section 2.04.3, an administrative adjustment application shall include:
 - 1. A site plan detailing property boundaries, footprints of all existing and proposed buildings, parking configuration, location of all utilities and easements, and any other details required to demonstrate conformance with all regulations and development standards applicable to the proposed zoning district;
 - 2. A written narrative justifying why the proposed use fits in with the surrounding neighborhood and detailing existing uses on neighboring properties;
 - 3. Conceptual building plans, including elevations, exterior materials, doors, decks, etc., if applicable;
 - 4. Any other information identified in the pre-application meeting.
- C. *Review and Approval*.
 - 1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.08.5 Findings for Approval.

- A. The relief requested is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The relief requested is compatible with the character of the surrounding area in terms of building scale, form, landscape, and site design;
- C. The relief requested is based upon sound planning or urban design principles that are professionally recognized and shall not result in new or increased nonconformities;
- D. The relief requested is based on the context of the property, is not solely for the convenience of one particular application on the site, and is not generally applicable to other sites in the area;
- E. The relief requested is the minimum necessary to meet the intent and applicability of the zoning district and the intent of the administrative adjustment process; and

- F. The relief requested is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for those areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.09 Lot Line Adjustment

2.09.2 **Purpose.** This section is intended to provide administrative review for minor adjustments to legal boundaries and title of property for proper recording. These adjustments have little or no impacts on public facilities and infrastructure and are within ownership patterns or development patterns that have otherwise been determined in accordance with the Wellington Comprehensive Plan.

2.09.3 **Applicability.** Adjustments to previously platted lots may be eligible for lot line adjustment where:

- A. The adjustment affects no more than 4 lots;
- B. The adjustment results in no additional lots;
- C. The adjustment does not affect public right-of-way or easement dedications that would adversely impact provision of public services unless a separate instrument can be recorded to provide necessary connectivity;
- D. The adjustment does not result in a vacation request; and
- E. The adjustment does not create nonconformities on any lot.

2.09.4 **Procedure.** All applications for lot line adjustment shall comply with the following specific procedures in addition to the administrative review procedures set forth in Section 2.04.6 and shall meet all requirements for a final subdivision plat as set forth in Section 2.16.

- A. *Pre-application Conference.* A pre-application conference is required for a lot line adjustment application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a lot line adjustment application shall include:
 - 1. A site plan detailing property boundaries, footprints of all existing and proposed buildings, parking configuration, location of all utilities and easements, and any other details required to demonstrate conformance with all regulations and development standards applicable to the proposed zoning district;
 - 2. A written narrative justifying why the proposed use fits in with the surrounding neighborhood and detailing existing uses on neighboring properties;

3. Conceptual building plans, including elevations, exterior materials, doors, decks, etc., if applicable;
4. Any other information identified in the pre-application meeting.

C. Review and Approval.

1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from, the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.09.5 Findings for Approval.

- A. The lot line adjustment is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The lot line adjustment shall meet the intent of the zone district in which it is located and all criteria and regulations specified in that zone district, including but not limited to minimum lot size and setbacks;
- C. The lot line adjustment shall not result in new or increased nonconformities;
- D. The lot line adjustment shall mitigate, to the maximum extent possible, any negative impacts on existing and planned public facilities;
- E. The lot line adjustment has no effect on the conditions applied to the approval and does not violate any Code requirement; and
- F. The lot line adjustment is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for those areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.10 Easement Adjustment

2.10.2 Purpose. This section is intended to provide administrative review for minor adjustments to easements for proper recording. These adjustments have little or no impacts on public facilities and infrastructure and are within ownership patterns or development patterns that have otherwise been determined in accordance with the Wellington Comprehensive Plan.

2.10.3 Applicability. Easement adjustments, vacations, or additions may be eligible for administrative approval where:

- A. The revisions are due to field conditions that could not have been reasonably anticipated or were discovered at the time of the final plat which result in no material change to the application;
- B. The revisions are due to changes in the development program, and these changes will impact public facilities the same or similarly to the previously approved application; or
- C. The application contains sufficient documentation showing the easement holder concurs with a proposed adjustment or vacation.

2.10.4 Procedure. All applications for easement adjustment shall comply with the following specific procedures in addition to the administrative review procedures set forth in Section 2.04.6 and shall meet all requirements for a final subdivision plat as set forth in Section 2.16.

- A. *Pre-application Conference.* A pre-application conference is required for an easement adjustment application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, an easement adjustment application shall include:
 - 1. A site plan detailing property boundaries, footprints of all existing and proposed buildings, parking configuration, location of all utilities and easements, and any other details required to demonstrate conformance with all regulations and development standards applicable to the proposed zoning district;
 - 2. A written narrative justifying why the proposed use fits in with the surrounding neighborhood and detailing existing uses on neighboring properties;
 - 3. Conceptual building plans, including elevations, exterior materials, doors, decks, etc., if applicable;
 - 4. Any other information identified in the pre-application meeting.
- C. *Review and Approval.*
 - 1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from, the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.10.5 Findings for Approval.

- D. The easement adjustment is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;

- A. The easement adjustment shall meet the intent of the zone district in which it will be located and all criteria and regulations specified in that zone district, including but not limited to minimum lot size and setbacks;
- B. The easement adjustment shall not result in new or increased nonconformities;
- C. The easement adjustment shall mitigate, to the maximum extent possible, any negative impacts on existing and planned public facilities in surrounding neighborhood;
- D. The easement adjustment has no effect on the conditions applied to the approval and does not violate any Code requirement; and
- E. The easement adjustment is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.11 Minor Deviation

2.11.2 **Purpose.** This section is intended to allow minor deviation from approved permits/approvals for changes that are determined necessary to address technical or engineering considerations first discovered during development or use that were not reasonably anticipated during the initial approval process.

2.11.3 **Applicability.** Minor Deviations may not be sought for the following approved applications:

- A. Amendments to Land Use Code;
- B. Rezone Applications;
- C. Administrative Adjustments;
- D. Lot Line Adjustments;
- E. Easement Adjustments;
- F. Variances; or
- G. Appeals.

2.11.4 **Procedure.** All applications for Minor Deviations shall comply with the following specific procedures in addition to the administrative review procedures set forth in Section 2.04.6.

- A. *Pre-application Conference.* A pre-application conference is required for a minor deviation application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a minor deviation application shall include:
 - 1. A site plan detailing property boundaries, footprints of all existing and proposed buildings, parking configuration, location of all utilities and easements, and any other details required to demonstrate

conformance with all regulations and development standards applicable to the proposed zoning district;

2. A written narrative justifying why the proposed use fits in with the surrounding neighborhood and detailing existing uses on neighboring properties;
3. Conceptual building plans, including elevations, exterior materials, doors, decks, etc., if applicable;
4. Any other information identified in the pre-application meeting.

C. Review and Approval.

1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from, the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.11.5 Findings for Approval.

- A. The relief requested is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The relief requested does not include increases in the amount of building floor area or reduction of the amount of open space set aside;
- C. The relief requested is based upon sound planning or urban design principles that are professionally recognized and shall not result in new or increased nonconformities;
- D. The relief requested is based on the context of the property, is not solely for the convenience of one particular application on the site, and is not generally applicable to other sites in the area;
- E. The relief requested is the minimum necessary to meet the intent and applicability of the zoning district and the intent of the minor deviation process; and
- F. The relief requested is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for those areas. (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.12 Site Plan

2.12.2 Purpose and Applicability. The site plan shall be submitted to apply for a building permit for all permitted principal uses of multi-family, commercial and industrial developments. The site plan shows lot arrangement and site design so the Town can make sure the site plan

complies with all Town regulations. A site plan shall also be submitted for any re-development, substantial changes to an existing site, changes that affect site circulation or access, and for any exterior modifications to an existing building within the C-2, Downtown Commercial District to show compliance with the Cleveland Avenue Architectural Standards. When a development requires approval as a conditional use, the site plan approval process shall be processed concurrently with the conditional use application. (Ord. 11-2007 [§1](#)) (Ord. No. [2-2013](#), § 2, 3-26-13)

2.12.3 Procedure. All site plan applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.2

- A. *Preapplication Conference.* A pre-application conference is required for a site plan application to discuss specific application procedures, criteria, and requirements for a formal application. This requirement may be waived at the discretion of the Planning Director or designee.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a site plan application shall include:
 - 1. Traffic study or waiver request. In accordance with the Standard Design Criteria and Standard Construction Requirements.
 - 2. Site plan map. The site plan map shall provide information per the site plan application checklist provided by the Planning Director or designee.
 - 3. Demonstrate, in written or graphic form, how the proposed structure is consistent with the Design and Development Standards found in Article 3 of this Chapter 16 of this Code.
 - 4. Final landscape plan per Section 5.04.
 - 5. Provide complete building elevations and perspective rendering, drawn to scale, with illustrations of all colors and identifying major materials to be used in the structures. In addition, Town staff may require building floor plans, sectional drawings, additional perspective drawings, models and/or computer visualizations when the impacts of a proposal warrant such information.
- C. *Review and Approval.*
 - 1. Planning Commission Approval.
 - a. The Planning Commission shall review the application at a regular meeting. Staff shall present their staff report and recommendation.
 - b. The Planning Commission shall either approve, approve with conditions, or deny the application.
 - 2. Town Board consideration of appeals.
 - a. The Town Board shall consider any appeal within forty-five (45) days of the close of the appeal period, except an appeal associated with a concurrent development application

requiring Town Board review or approval, which the Town Board shall consider with final action on the concurrent development application. The Town Board shall apply the site plan review criteria to either uphold, modify, or reverse the Planning Commission's decision.

D. Post Decision Actions. Same as referenced in Section 2.04.3, in addition to the following:

1. Any aggrieved party, who wishes to appeal the action shall file a written appeal stating the reasons why the Planning Commission action is incorrect. The applicant shall file the appeal with the Town Administrator/Clerk within seven (7) days of the meeting at which such action was taken.

E. Post Decision Actions. Same as referenced in Section 2.04.3, in addition to the following:

1. Memorandum of Agreement for Public Improvements. Staff may require that the applicant execute a MOAPI to assure the construction of on-site and off-site improvements as a condition of approval of the site plan. Guarantees in the site plan agreement shall be secured by an irrevocable letter of credit in an amount determined appropriate by Town staff.
2. Building permit. A building permit shall be issued only when final site plan plans have been submitted, reviewed, and approved by the Department directors.
 - a. Exception. A building permit may be issued for the construction of a foundation and shell only for commercial and industrial uses to allow for the partial construction of a speculation building with unknown tenant and use.
3. Certificate of Occupancy. When building construction and site development are completed in accordance with the approved site plan and building permits, a Certificate of Occupancy may be issued.
4. Phasing and expiration of approval. The site plan shall be effective for a period of three (3) years from the date of approval, unless stated otherwise in the written site plan approval. Building permits shall not be issued based on site plans that have an approval date more than three (3) years old. For multi-phased plans, building permits shall not be issued based on an approval date more than three (3) years from the date of Phase I approval. (Ord. 11-2007 §1) (Ord. No. 13-2011, § 1, 11-22-11)

2.12.4 Findings for Approval.

- A. The site plan is consistent with the Comprehensive Plan and the intent stated in this Land Use Code.
- B. The lot size and lot dimensions are consistent with what is shown on the approved final plat.
- C. No buildings or structures infringe on any easements.
- D. The proposed site grading is consistent with the requirements of _____ (insert reference to any applicable adopted storm drainage criteria or master drainage plans).
- E. The density and dimensions shown conform with Article 5 of Chapter 16 of this Code, Density and Dimensional Standards, or the approved PUD requirements.

- F. The applicable Design and Development Standards have been adequately addressed and the proposed improvements conform with Article 3 of Chapter 16 of this Code. (Ord. 11-2007 §1)

2.12.5 Amendments to Approved Site Plans.

- A. Minor variations in the location of structures, improvements or open space areas caused by engineering or other unforeseen difficulties may be reviewed and approved by the Town staff. Such changes shall not exceed ten percent (10%) of any measurable standard or modify the use, character, or density of an approved site plan. All plans so modified shall be revised to show the authorized changes and shall become a part of the permanent records of the Town.
- A. Changes to approved site plans that exceed the ten percent (10%) threshold, or other major modifications (such as changes in building size or footprint, relocation of access points, changes to required parking, etc.), shall be considered as a new site plan application. Such amendments shall require Planning Commission review and approval to become effective. A complete site plan application shall be prepared and submitted in compliance with the requirements set forth in this Section. (Ord. 11-2007 §1)

2.13 Plot Plan

- 2.13.2 Purpose and Applicability.** The plot plan shall be submitted to apply for a building permit for any building or structure constructed on a single-family home or duplex lot. The plot plan shows where the proposed building or structure will be located on the lot so the Town can make verify compliance with all Town regulations. (Ord. 11-2007 [§1](#))

- 2.13.3 Procedure.** All plot plan applications shall comply with the following specific procedures in addition of the general procedures in Section 2.04.2

- B. *Pre-application Conference.* A pre-application conference is not required for a plot plan application.
- A. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a plot plan application shall include:
1. Plot plan map.
 2. Drainage information. Provide the Town with information regarding how the lot will drain, if requested by the Planning Director or designee. Submit a copy of the subdivision master drainage plan for the area of the lot, if available.
- B. *Review and Approval.* The Planning Director or designee shall review the plot plan map and determine if it is consistent with the findings for approval. The Planning Director or designee will submit their determination to the Building Department to accompany the building permit application. (Ord. 11-2007 §1)

2.13.4 Findings for Approval.

- A. The plot plan is consistent with the Comprehensive Plan and the intent stated in this Land Use Code.
- B. The lot size and lot dimensions are consistent with what is shown on the approved final plat.
- C. No buildings or structures infringe on any easements.
- D. The proposed site grading is consistent with the subdivision grading and drainage plan, if applicable; otherwise, it shall meet the Town's approval.
- E. The density and dimensions shown conform with the Density and Dimensional Standards (Article 5 of Chapter 16 of this Code) or the approved PUD requirements.
- F. The applicable Design and Development Standards have been adequately addressed. (Ord. 11-2007 §1)

2.14 Sign Permit 1

- A. Applications. Each sign permit requires a separate application. The applicant must file the application on a form furnished by the Building and Planning Department and include payment of the non-refundable permit fee. The applicant must submit all information requested on the application form if applicable.
- B. Review.
 - 1. The Building and Planning Department will review a sign permit application to determine if it is complete. If the application is incomplete, the Building and Planning Department will provide a list of items necessary to complete the application within 7 business days after the application was submitted.
 - 2. The Building and Planning Department will review a complete sign permit application for compliance with this Section and render an administrative decision.
 - 3. The Building and Planning Department will act on an application by approving, approving with conditions, or denying the application within 30 days of the date the application is deemed complete.
- C. Approval Criteria. The Building and Planning Department will issue a sign permit if the proposed sign conforms with all applicable provisions of this Section and any conditions or stipulations of any applicable rezoning, special use permit, site plan, or development plan.
- D. Expiration. A sign permit becomes null and void if installation does not commence within 120 days from the date of permit approval. If work authorized by the permit is suspended or abandoned for 120

¹ This new subsection replaces the previous requirement for sign approval during site plan review from §16-14-40 with a new sign permit as recommended in the Codes Assessment Sign Code Recommendation 3: "Develop application process for a sign permit." The subsection provides for application submittals to be listed on the application. Specific submittals can be included in this subsection if preferred.

days from the date the work commences, a new permit is required to complete the installation work, even if no changes are made to the original sign plan.

E. **Revocation.** The Building and Planning Department may revoke a sign permit if:

1. It is issued in error; or
2. The sign or sign supporting structure is installed contrary to the approved plans or in violation of this Section.

2.15 Conditional Uses

2.15.2 **Purpose.** Conditional Use approval provides flexibility and helps diversify uses within a zoning district. Specific conditional uses for each zone district are listed in Article 6.

2.15.3 **Applicability.** Because of their unusual or special characteristics, conditional uses require review and evaluation so that they may be located properly with respect to their effects on surrounding properties. The review process prescribed in this section assures compatibility and harmonious development between conditional uses, surrounding properties and the Town's goals and policies. Conditional uses may be permitted subject to conditions and limitations as the Town may prescribe to ensure that the location and operation of the conditional uses will be in accordance with the conditional use criteria. The scope and elements of any conditional use may be limited or qualified by the conditions applicable to the specific property. Where conditions cannot be devised to achieve these objectives, applications for conditional use permits shall be denied. (Ord. 11-2007 §1)

2.15.4 **Procedure.** All conditional use applications shall comply with the following specific procedures in addition to the general application procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is optional for a conditional use application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a conditional use application shall include the following:
 1. A written statement and any graphics necessary to describe the precise nature of the proposed use and its operating characteristics and to illustrate how all conditional use review criteria have been satisfied.
 2. A map showing the proposed development of the site, including any applicable topography, building locations, parking, traffic circulation, usable open space, landscaped area and utilities and drainage features.
 3. Preliminary building plans and elevations sufficient to indicate the dimensions, general appearance, and scale of all buildings.

4. Such additional material as the Planning Director or designee may prescribe or the applicant may submit pertinent to the application.

C. Review and Approval.

1. Planning Commission Recommendation.

- a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of and inseparable from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.15.5 Findings for Approval.

- A. The conditional use is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The conditional use will be adequately served with public utilities, services and facilities (i.e., water, sewer, electric, schools, street system, fire protection, public transit, storm drainage, refuse collection,

parks system, etc.) and not impose an undue burden above and beyond those of the permitted uses of the district.

- C. The conditional use will not substantially alter the basic character of the district in which it is in or jeopardize the development or redevelopment potential of the district.
- D. The conditional use will result in efficient on- and off-site traffic circulation which will not have a significant adverse impact on the adjacent uses or result in hazardous conditions for pedestrians or vehicles in or adjacent to the site.
- E. Potential negative impacts of the conditional use on the rest of the neighborhood or of the neighborhood on the conditional use have been mitigated through setbacks, architecture, screen walls, landscaping, site arrangement or other methods. The applicant shall satisfactorily address the following impacts or state a negligible impact:
 - 1. Traffic;
 - 2. Activity levels;
 - 3. Light;
 - 4. Noise;
 - 5. Odor;
 - 6. Building type, style and scale;
 - 7. Hours of operation;
 - 8. Dust; and
 - 9. Erosion control.
- F. The applicant has submitted evidence that all applicable local, state, and federal permits have been or will be obtained. (Ord. 11-2007 §1)

2.16 Minor Subdivisions

Minor Subdivision Plat

2.16.2 Purpose. The purpose of the minor subdivision plat is to provide an administrative process for subdivision of land that meets the requirements of the applicability section below.

2.16.3 Applicability. A minor subdivision shall be defined as a subdivision of land that meets the following conditions:

- A. The property has previously been platted within the Town;
- B. The entire tract to be subdivided is five (5) acres or less in size;
- C. The resulting subdivision will produce four (4) or fewer additional lots; and
- D. There will be no exceptions to the Subdivision Design Standards. (Ord. 11-2007 §1)

2.16.4 Procedure. All minor subdivisions shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3

- A. *Pre-application Conference.* A pre-application conference is required for a minor subdivision application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a minor subdivision application shall include:
 - 1. Minor subdivision plat.
 - 2. General development information. Provide a written description addressing how the proposed development conforms with the Design and Development Standards, Chapters 16 and 17 of this Code and the Comprehensive Plan.
- C. *Review and Approval.*
 - 1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from, the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.16.5 Findings for Approval.

- 1. The minor subdivision is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- 2. The minor subdivision meets the intent of the zone district in which it will be located and all criteria and regulations specified in that zone district, including but not limited to minimum lot size and setbacks;
- 3. The minor subdivision does not result in new or increased nonconformities;
- 4. The minor amendment mitigates, to the maximum extent possible, any negative impacts on existing and planned public facilities in surrounding neighborhood;
- 5. The minor amendment has no effect on the conditions applied to the approval of the plat and does not violate any requirement of the Code; and
- 6. The administrative plat is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.17 Major Subdivisions

Preliminary Plat

2.17.2 **Purpose.** The purpose of the major subdivision preliminary plat is to provide the Town with an overall master plan for the proposed development. (Ord. 11-2007 §1)

2.17.3 **Applicability.** A major subdivision shall be defined as a subdivision of land results in more than four (4) additional lots.

2.17.32.17.4 **Procedure.** All major subdivision preliminary plat applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is required for a major subdivision preliminary plat application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a major subdivision application shall include:
 - 1. Preliminary plat.
 - 2. General development information. Provide a written description of the existing conditions on the site and the proposed development, including an explanation of how the plan is consistent with the Land Use Code and Comprehensive Plan.
 - 3. Preliminary grading and drainage plan and report. This plan and report must be certified by a Colorado-registered professional engineer, including storm drainage concepts such as locations for on-site detention or downstream structural improvements and soil erosion and sedimentation control plans and specifications. It must also discuss the impacts on and to any existing floodways and/or floodplains on and adjacent to the site as well as any FEMA applications required.
 - 4. Preliminary utility plan. This plan shall be prepared by a registered professional engineer. It is necessary that the engineer consult with the appropriate utility service providers regarding the design of all utilities through the subdivision. Town utilities shall be designed in conformance with the Town's Standard Design Criteria and Standard Construction Requirements.
 - 5. Preliminary landscape and open space plan per Section 5.04.
 - 6. Traffic study. This study must be prepared by a professional traffic engineer in conformance with the Division 1 Section 01300 Standard Design Criteria and Standard Construction Requirements.
 - 7. Draft of proposed covenants and architectural design guidelines.
 - 8. Mineral, oil and gas rights documentation. Evidence that the surface owner has contacted all lessees of mineral, oil and gas rights associated with the site and is working towards resolution. Included in the evidence must be the name of the current contact person, their phone number and mailing address.

9. Soils report.

C. Review and Approval.

1. Planning Commission Recommendation.

- a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of and inseparable from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.17.42.17.5 **Findings for Approval.**

- A. The preliminary plat represents a functional system of land use and is consistent with the rationale and criteria set forth in this Code and the Comprehensive Plan.
- B. The land use mix within the project conforms to the Town's Zoning District Map and furthers the goals and policies of the Comprehensive Plan including:
 1. The proposed development promotes the Town's small town, rural character;
 2. Proposed residential development adds diversity to the Town's housing supply;

3. Proposed commercial development will benefit the Town's economic base;
 4. Parks and open space are incorporated into the site design;
 5. The proposed project protects the Town's environmental quality; and
 6. The development enhances cultural, historical, educational and/or human service opportunities.
- C. The utility design is adequate at a capacity that promotes the Town's character while strengthening the Town's vitality.
- D. The transportation design meets the intent of the Comprehensive Plan to provide increased connectivity, reduce traffic impacts, and encourage walkability.
- E. Negative impacts on adjacent land uses have been identified and satisfactorily mitigated.
- F. There is a need or desirability within the community for the applicant's development and the development will help achieve a balance of land use and/or housing types within the Town, according to the Town's goals. (Ord. 11-2007 §1)

Final Plat

~~2.17.52.17.6~~ **Purpose.** The purpose of the final plat is to complete the subdivision of land consistent with the technical standards. (Ord. 11-2007 §1)

~~2.17.62.17.7~~ **Procedure.** All major subdivision preliminary plat applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is not required for a major subdivision final plat application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a major subdivision application shall include:
 1. Final plat.
 2. General development information. Provide a written description confirming that the final plat conforms with the preliminary plat. In addition, the description shall address how the proposed development conforms with the Design and Development Standards.
 3. Complete engineering plans and specifications.
 - a. *Construction plans and profiles.*
 - b. *Structure details.* Sufficient data shall be given to construction of major structures and road appurtenances such as bridges, culverts, gutters, drives, walks, cross pans, etc.; detail shall include orientation line and grade, cross-sections, dimensions, reinforcement schedules, materials, quality specification, etc.
 - c. *Sewage collection and water supply distribution plans, profiles and specifications.* The plans, profiles and specifications shall be prepared by a registered professional engineer and shall conform to the Standard Design Criteria and Standard Construction Requirements.

- d. *Final drainage plans and reports.* Based upon the approved preliminary drainage plan, a final report is to be submitted in accordance with applicable storm drainage design criteria as determined at the initial preapplication conference.
 - e. *Final grading plan.*
 - f. *Soils reports.* The soils reports shall detail special foundation requirements (shall be submitted after overlot grading is complete) and pavement design (may be submitted prior to building permit).
 - g. *Final street lighting plan.* A final street lighting plan shall be prepared in conjunction with the electric utility. The plan must specify the number, kind and approximate location of street lights.
 - h. *Final landscape plan.*
4. Special documents (as needed).
- a. Special improvement district documents.
 - b. Maintenance bonds.
 - c. Special agreements (as may be required by the Town).
 - d. Work in Right-of-Way permit (from the Town).
 - e. Floodplain Use permit (from the Town).
 - f. Grading permit (from the Town).
 - g. State Highway Utility permit (from Colorado Department of Transportation).
 - h. State Highway Access permit (from Colorado Department of Transportation).
 - i. Construction Dewatering permit (from Colorado Department of Public Health and Environment).
 - j. 404 permit (from Army Corps of Engineers).
 - k. Air Pollution Emission Notice (APEN) (from Colorado Department of Public Health and Environment).
 - l. Work in Ditch Right-of-Way permit (from individual ditch companies).
 - m. Rare Species Occurrence Survey (from U.S. Fish and Wildlife Service).
 - n. Approved adjudication of water rights and a plan of augmentation (if applicable).
 - o. Protective covenants, homeowners' association (HOA) documents, articles of incorporation for HOA, and Architectural Design Guidelines finalized and in a form for recording. If there are open space areas to remain in private ownership within the subdivision, the HOA documents must have in place a mechanism which will assure maintenance will be funded in perpetuity.
 - p. FEMA-approved applications (i.e., Conditional Letter of Map Revisions [CLOMR] or Letter of Map Revisions [LOMR]).

- q. Documentation showing who will own and maintain the open space.
- r. Documentation for dedication of public sites for open space or other civic purposes.
- 5. "Clean" final plat for addressing.
 - a. Title of project.
 - b. North arrow, scale (not greater than 1"=100') and date of preparation.
 - c. Vicinity map.
 - d. Lot and block numbers, numbered in consecutive order.
 - e. Rights-of-way and street names.
 - f. Property boundary.

C. Review and Approval.

1. Planning Commission Recommendation.

- a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of and inseparable

from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

D. *Post Decision Actions*. The applicant shall submit the following documentation to the Town Planner following final decision of the major subdivision final plat:

1. List of contractors. List of all contractors that will be performing the improvements.
2. Proof of insurance. Proof of workers' comprehensive insurance and liability insurance for each contractor.
3. Open space deed restriction. Areas designated as open space shall be protected by a deed restriction or other appropriate method to ensure that they cannot be subdivided or developed in the future and will remain as open space in perpetuity.
4. Other certificates, affidavits, enforcements, or deductions. As required by the Planning Commission or Town Board. (Ord. 11-2007 §1)
5. Memorandum of Public Improvements (MOAPI). This agreement assures construction of the required improvements. This document shall be signed by the developer and the Town, the signatures shall be notarized and the document shall be recorded by the Town Administrator/Clerk with the County Clerk and Recorder.
6. General warranty deed. This deed conveys to the Town all public lands other than streets shown on the plat or, in lieu of a deed, a check in an amount to be determined by the Town.
7. Improvements guarantee. Letter of credit from a bank in Colorado or other acceptable collateral in the amount stipulated to in the MOAPI or other agreements or contracts, posted in favor of the Town in an amount sufficient to assure construction of public improvements.

2.17.72.17.8 Findings for Approval.

- A. The final plat conforms with the approved preliminary plat and incorporates recommended changes, modifications and conditions attached to the approval of the preliminary plat unless otherwise approved by the Town Board.
- A. The development will substantially comply with the Design and Development Standards as set forth in Chapter 16, Article 3 of this Code.
- B. All applicable technical standards have been met. (Ord. 11-2007 §1)

2.18 Planned Unit Development (PUD)

2.18.2 **Purpose**. The Planned Unit Development (PUD) permits and encourages innovative design and high quality, master-planned developments on large parcels of land.

2.18.3 **Applicability**. Planned Unit Developments may be eligible for approval pursuant to the requirements established in this section.

2.18.4 General PUD Requirements. Properties utilizing the PUD Overlay District shall be subject to the following:

- A. The area of land for the PUD may be controlled by one (1) or more landowners and must be developed under unified control or a unified plan of development.
- B. Any areas designated as private streets and/or common open space, including land, an area of water or a combination of land and water within the site designated for a PUD, shall be designed and intended primarily for the use or enjoyment of residents, occupants and owners of the PUD; and provisions shall be made for the establishment of an organization for the ownership and maintenance of such private streets and/or common open space areas unless other adequate arrangements for the ownership and maintenance thereof are provided in a manner acceptable to the Town.
- C. All requirements set forth in this Code otherwise applicable to the area of land proposed for a PUD shall govern, except to the extent that the unified plan of development for residential, commercial, educational, recreational, or industrial uses or any combination thereof may propose exceptions in lot size, bulk, type of use, density, lot coverage, open space, or other standards within the existing land use regulations.
- D. No PUD may be approved by the Town without the written consent of the landowner whose property is included within the PUD.

2.18.5 General PUD Procedure.

- A. All PUD applications shall be submitted and processed simultaneously with the processing of subdivision applications for the property per the procedures set forth in Section 2.16. In addition, an application for a rezone shall be processed per Section 2.07.
- B. Rezoning to a PUD shall occur concurrently with a preliminary plat/preliminary PUD development plan. Public hearings for the zoning of a property as a PUD and for preliminary PUD development plan approval may be combined or can occur separately.
- C. Development within a PUD cannot occur unless and until a final plat for the portion of the property to be developed has been approved and recorded as provided in Section 2.16.
- D. Upon approval of a final PUD development plan, the Town Board shall adopt an ordinance establishing the PUD Overlay District for the property in accordance with that plan.
- E. In addition to all of the information required as part of the sketch plan, preliminary plat and final plat application packages, applications for a PUD development plan and PUD Overlay District shall include additional information as outlined below.

Sketch PUD Development Plan

2.18.6 Purpose. The purpose of the sketch PUD development plan is to provide the Town with a preliminary master plan concept for the proposed development.

2.18.7 Procedure. All sketch PUD development plan applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is required for a sketch PUD development plan application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a major subdivision application shall include:
 - 1. A written PUD description as part of the general development information, which includes:
 - a. A list of all subdivision regulation exceptions proposed for the PUD.
 - b. Identification of the underlying zoning districts for the property and a description of any proposed modifications and/or restrictions to the allowed uses and/or standards within the districts. If any conditional uses are requested, explain how the conditional use review criteria will be addressed.
 - c. Identification and explanation of the benefits which will be provided by the PUD to offset the impact of the modifications requested (i.e., if the minimum lot size is decreased, additional functional, centrally located common open space will be provided; or if the width of the local street right-of-way is decreased by eliminating on-street parking, then there will be designated parking areas within five hundred [500] feet of all residences, etc.). All proposed benefits must offset the proposed modifications.
 - d. An explanation of how the proposed PUD will be compatible with adjacent neighborhoods which now exist or are proposed in the future. Describe any proposed buffering techniques which serve to achieve such compatibility.
 - e. Any additional relevant information which the Town may deem necessary.

C. *Review and Approval.*

- 1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from, the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

Preliminary PUD Development Plan

2.18.8 Purpose. The purpose of the preliminary PUD development plan is to provide the Town with an overall master plan with preliminary engineering detail to ensure all provisions of this Land Use Code can be met.

2.18.9 Procedure. All preliminary PUD development plan applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is not required for a preliminary PUD development plan application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a major subdivision application shall include:
 - 1. A written PUD description as part of the general development information which includes:
 - a. A list of all subdivision regulation exceptions being proposed for the PUD and an explanation of why such exceptions are justified.
 - b. Identification of the underlying zoning districts for the property and a description of any proposed modifications and/or restrictions to the allowed uses and/or standards within the districts. Provide a comparison between the proposed preliminary PUD plan to the elements and standards of the underlying zone districts as contained in this Chapter. If any conditional uses are requested, explain how the conditional use review criteria will be addressed.
 - c. A description of how the proposed PUD overlay rezoning satisfies one (1) or more of the criteria for amendments to the official zoning map.
 - d. Identification and an explanation of the benefits which will be provided by the PUD to offset the impact of the modifications requested. The proposed benefits must offset the proposed modifications.
 - e. An explanation of how the proposed PUD will be compatible with adjacent neighborhoods which now exist or are proposed in the future. Buffering techniques which serve to achieve such compatibility shall be described.
 - f. An explanation of how the preliminary PUD development plan is consistent with the sketch PUD development plan or, if there are differences, the rationale for the changes.
 - g. Draft copies of owners' association documents (covenants, conditions, restrictions, and any architectural design guidelines) that provide an acceptable program for the continuing maintenance of open space, recreational areas, walkways, and private streets within the PUD that detail the type of organizational structure responsible for such ongoing maintenance and that provide for architectural review based on the design guidelines.
 - h. Any additional relevant information which the Town may deem necessary.
 - 2. Preliminary PUD development plan map. The preliminary PUD development plan map shall be prepared using the preliminary plat map as the base. The base shall include a clear graphic or written representation of:
 - a. All principal, conditional and accessory uses within each land use category within the PUD (i.e., single-family, multi-family, commercial, etc.), either listed specifically or by reference to

the zoning districts within the Town. In particular, any modifications to the principal, conditional, and accessory uses of the underlying zone districts shall be noted.

- b. Standards for principal and accessory uses within each land use category, to include:
 - i. Minimum lot area.
 - ii. Maximum lot coverage.
 - iii. Maximum floor area ratio (total floor area to total lot area).
 - iv. Maximum building height.
 - v. Parking requirements for principal, accessory, and conditional uses.
 - vi. Any additional relevant information which the Town may deem necessary.
- c. Proposed phasing for the development.

C. Review and Approval.

1. Planning Commission Recommendation.

- a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of and inseparable

from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

Final PUD Development Plan

2.18.10 Purpose. The purpose of the final PUD development plan is to complete the subdivision of land consistent with the technical standards.

2.18.11 Procedure. All final PUD development plan applications shall comply with the following specific procedures in addition to the general procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is not required for a final PUD development plan application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a major subdivision application shall include:
- C. A written PUD description as part of the general development information, based on the materials submitted for the preliminary PUD development plan and on comments received from the Town at the time of preliminary plan review. All of the items listed above for the preliminary PUD development plan in finalized form shall be included. An explanation shall also be included of how the final PUD development plan is consistent with the preliminary PUD development plan, or if there are differences, the rationale for the changes.
- D. A final PUD development plan map. The final PUD development plan map using the final plat map as the base shall be prepared.
- E. Any additional relevant information which the Town may deem necessary.

2.18.12 Findings for Approval.

- A. *Sketch PUD development plan review criteria.* The following review criteria will be used by the Town staff, Planning Commission and Town Board to evaluate all PUD applications at the time of sketch PUD plan/sketch plan review:
 - 1. The proposed benefits offset the proposed exceptions to the zoning and subdivision standards, and the exceptions are in the best interest of the public health, safety, and welfare.
 - 2. The proposed PUD conforms to the PUD restrictions, and the proposed zoning is compatible with the surrounding land uses.
 - 3. The PUD proposes creative and innovative design and high-quality development, thereby protecting and promoting public safety, convenience, health, and general welfare.
 - 4. The uses and densities in the proposed PUD are compatible and will be effectively integrated with adjacent neighborhoods which now exist or are proposed in the future.
 - 5. The proposed PUD is in general conformance with the Comprehensive Plan.
 - 6. One (1) or more of the criteria for amendment of the official zoning map has been satisfied.

- B. *Preliminary PUD development plan review criteria.* In addition to all of the review criteria for a sketch PUD development plan, the following review criteria will be used by the Town staff and Town Board to evaluate all PUD applications at the time of the preliminary PUD plan/preliminary plat:
1. The preliminary PUD development plan is substantially consistent with the sketch development plan as approved by the Town Board.
 2. All sketch PUD development plan conditions of approval have been adequately addressed on the preliminary PUD development plan.
- C. *Final PUD development plan review criteria.* In addition to all of the review criteria for a preliminary PUD development plan, the following review criteria will be used by the Town staff and Town Board to evaluate all PUD applications at the time of the final PUD plan/final plat:
1. The final PUD development plan is substantially consistent with the preliminary PUD development plan as approved by the Town Board.
 2. All preliminary PUD development plan conditions of approval have been adequately addressed on the final PUD development plan.
 - a. Compliance with PUD Overlay District/final development plan. The Town Board may initiate the process to repeal the ordinance establishing the PUD Overlay District if:
 - i. The project for which the PUD overlay zone was established is not carried out pursuant to the approved final PUD development plan; provided, however, that the Town Board may approve appropriate modifications to the final PUD development plan from time to time prior to completion of the proposed development; or
 - ii. Building activity for the PUD Overlay District has not commenced within a period of one (1) year after the effective date of the creating ordinance, unless otherwise approved by the Town Board. (Ord. 11-2007 §1)

2.19 Condominium/Townhome Plat

2.19.2 **Purpose.** Condominium or townhome plat approval is intended for adjustments to legal boundaries, easements, and title of property for proper recording. These adjustments have little or no impacts on public facilities and infrastructure and are within ownership patterns or development patterns that have otherwise been determined in accordance with the Wellington Comprehensive Plan.

2.19.3 **Applicability.** Condominiumization or Townhome Plats may be eligible for administrative approval where:

- A. The subdivision is a condominiumization or townhome subdivision.

2.19.4 Procedure. All applications for administrative plat review shall comply with the following specific procedures in addition to the administrative review procedures set forth in Section 2.04.4 and shall meet all requirements for a final subdivision plat as set forth in Section 2.16.

- A. *Pre-application Conference.* A pre-application conference is required for a condominium or townhome plat application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Application Submittal.* The condominium or townhome plat application shall follow the requirements established in Section 2.08.3.B.
- C. *Review and Approval.* The condominium or townhome plat shall follow the requirements established in Section 2.08.3.C.

2.19.5 Additional Standards – Condominiumization. For final condominiumization approval the following additional provisions are needed:

- A. A map showing all common areas (general and limited common elements) and usages of the building and grounds, for the interior division of the building showing horizontal and vertical boundaries of all units, including a distance from a building corner to a property corner or other survey reference; and
- B. A copy of the declaration applicable to the condominium project, as defined in Section 38-33-105, C.R.S. 1973, as amended and/or as may be required pursuant to the Colorado Common Interest Ownership Act, C.R.S. 38-33.3-101 et.seq., as amended.
- C. A copy of the condominium association Articles of Incorporation, bylaws, and covenants. The bylaws and declaration of covenants shall contain the information required by the Condominium Ownership Act of the State of Colorado and the Colorado Common Interest Ownership Act, if applicable. All condominium projects shall comply with this requirement.
- D. A management plan that states:
 - 1. The responsible party for managing the common area;
 - 2. Provisions for selecting, appointing, and securing management; and
 - 3. Responsibilities and duties of the management entity.
- E. A maintenance plan that states:
 - 1. The responsible entity for repair and maintenance of common areas;
 - 2. What will be included in the maintenance program, including but not limited to provisions for snow removal, trash removal, maintenance of pools, hot tubs, common areas and other amenities; and
 - 3. The mechanism used to fund the management and maintenance activities of the development.
- F. In addition, if there are any restrictive covenants, conditions, or restrictions other than specified in the declaration, they shall be filed concurrently with the filing of the final plat.

2.19.6 Additional Standards – Townhomes.

- A. A townhome lot may be subdivided prior to the construction of the foundation provided that:
 - 1. The final plat of any such townhome lot shall contain a plat note that provides as follows:
 - a. Pursuant to Section 4.02.8.G of the Town of Wellington Code, the townhome lot identified hereon as “_____” has been subdivided prior to the construction of the townhome or its foundation. Pursuant to said section, the owner(s) of the townhome lot, as well as the owner(s) of any property that abuts the townhome lot must, within ninety (90) days after the construction of the foundation for the townhome, have a survey of the location of the foundation prepared and make a subdivision plat amendment application to the Town that shall cause the townhome lot depicted on the plat to be coterminous with the foundation of the townhome as constructed; and
 - 2. Within ninety (90) days after the construction of the foundation for the townhome, the owner(s) of the townhome lot shall have a survey of the location of the foundation prepared and, along with the owner(s) of any property that abuts the townhome lot, shall make and pursue to completion an application to the Town to amend the plat of the townhome that causes the townhome lot to be coterminous with the foundation of the townhome as constructed.
- B. With respect to a townhome lot that has been subdivided prior to the construction of the townhome or its foundation, it is unlawful:
 - 1. For the owner(s) of the lot to fail to, within ninety (90) days after the construction of the foundation, have a survey of the location of the foundation prepared; and
 - 2. For the owner(s) of the lot and the owner(s) of any property that abuts the townhome lot, to fail to, within ninety (90) days after the construction of the foundation, make and pursue to completion an application to the Town to amend the plat of the townhome lot that causes the townhome lot to be coterminous with the foundation of the townhome as constructed.
- C. For final townhome plat approval the following additional provisions are needed:
 - 1. A map showing all common areas (general, limited common area), usages of the building and grounds, and the building showing horizontal boundaries for the interior division of all unit;
 - 2. A copy of the Townhome Association Articles of Incorporation, bylaws, and covenants;
 - 3. A management plan that states:
 - a. The responsible party for managing the common area;
 - b. Provisions for selecting, appointing, and securing management; and
 - c. Responsibilities and duties of the management entity.
 - 4. A maintenance plan that states:
 - a. The responsible entity for repair and maintenance of common areas;

- b. What will be included in the maintenance program, including but not limited to provisions for snow removal, trash removal, maintenance of pools, hot tubs, common areas and other amenities; and
 - c. The mechanism used to fund the management and maintenance activities of the development.
- D. In addition, if there are any restrictive covenants, conditions, or restrictions other than specified in the declaration, they shall be filed concurrently to filing of the final plat; and
- E. A copy of the declaration applicable to the townhome project, as defined in Section 38-33-105, C.R.S. 1973, as amended and/or as may be required pursuant to the Colorado Common Interest Ownership Act, C.R.S. 38-33.3-101 et. seq., as amended.

2.19.7 Findings for Approval.

- A. The condominium or townhome plat is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The condominium or townhome plat shall meet the intent of the zone district in which it will be located and all criteria and regulations specified in that zone district, including but not limited to minimum lot size and setbacks;
- C. The condominium or townhome plat shall not result in new or increased nonconformities;
- D. The condominium or townhome plat shall mitigate, to the maximum extent possible, any negative impacts on existing and planned public facilities in surrounding neighborhood;
- E. The condominium or townhome plat has no effect on the conditions applied to the approval of the plat and does not violate any Code requirement; and
- F. The condominium or townhome plat is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.20 Revised Final Plat

2.20.2 Purpose. Revised final plat approval is intended for revisions to legal boundaries, easements, and title of property for proper recording. These revisions are within ownership patterns or development patterns that have otherwise been determined in accordance with the Wellington Comprehensive Plan.

2.20.3 Applicability. Revisions to a previously approved final plat may be eligible for administrative approval where:

- A. The revisions are due to field conditions that could not have been reasonably anticipated or were discovered at the time of the final plat which results in no material change to the application; or

- B. The revisions are due to changes in the development program, and these changes will result in no additional lots and will impact public facilities the same or similarly to the previously approved application.

2.20.4 Procedure. All revised final plat applications shall comply with the following specific procedures in addition to the administrative review procedures set forth in Section 2.04.4 and shall meet all requirements for a final subdivision plat as set forth in Section 2.16.

- A. *Pre-application Conference.* A pre-application conference is required for a revised final plat application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Application Submittal.* The revised final plat application shall follow the requirements established in Section 2.08.3.B.
- C. *Review and Approval.* The revised final plat application shall follow the requirements established in Section 2.08.3.C.

2.20.5 Findings for Approval.

- D. The revised final plat is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- A. The revised final plat shall be meet the intent of the zone district in which it will be located and all criteria and regulations specified in that zone district, including but not limited to minimum lot size and setbacks;
- B. The revised final plat shall not result in new or increased nonconformities;
- C. The administrative plat shall mitigate, to the maximum extent possible, any negative impacts on existing and planned public facilities in surrounding neighborhood;
- D. The revised final plat has no effect on the conditions applied to the approval of the plat and does not violate any Code requirement; and
- E. The revised final plat is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.21 Annexation

2.21.2 Purpose. This Section establishes the procedure to bring land under the jurisdiction of the Town in compliance with the Colorado Municipal Annexation Act of 1965, as amended. (Ord. 11-2007 §1)

2.21.3 Responsibilities of Applicant. In addition to other duties imposed upon all applicants by this Code and the Colorado Municipal Annexation Act of 1965, as amended, all applicants shall have the following responsibilities:

- A. The applicant is responsible for having a representative at all meetings where the request is reviewed. Failure to have a representative present will be cause to have the item withdrawn from the agenda of that meeting.
- B. The applicant shall consult with the Planning Department to discuss any special conditions pertaining to the annexation and to obtain an annexation petition. (Ord. 11-2007 §1)

2.21.4 Procedure.

- A. *Pre-application Conference.* A pre-application conference is required for an annexation application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Annexation Petition Submittal.* At least fifteen (15) days prior to the presentation of any annexation petition to the Town Board, the applicant shall submit to the Town an annexation petition including:
 - 1. An Annexation Map depicting at a minimum the property boundaries, location of existing buildings, parking, utilities, and easements as well as current and proposed zoning and land use categories.
 - 2. A Master Plan depicting the preliminary design of the proposed use including lot and block layout and proposed residential density.
 - 3. A request for zoning of the area pursuant to Section 2.07, to be reviewed concurrently with the annexation.
 - 4. Supportive information. The following supportive information shall be submitted with the annexation map and master plan:
 - a. Soils description and limitation.
 - b. Preliminary utility plan.
 - c. Statement on community need for proposed annexation and zoning.
 - d. For all annexations in excess of ten (10) acres, the applicant shall obtain from the school district governing the area to be annexed a statement of the effect of the annexation upon the school district, including an estimate of the number of students generated by the proposed annexation and the capital construction required to educate such students. (Ord. 11-2007 §1) (Ord. No. 5-2008, § 1, 3-11-08)
- C. *Review and Approval.*
 - 1. The Planning Director or designee shall review all documents submitted for completeness and accuracy.
 - 2. Once it is determined that the annexation petition is complete and accurate, the Planning Director or designee shall present the annexation petition and a resolution initiating annexation proceedings to the Town Board, which shall thereafter establish a date for a public hearing.

3. Upon the establishment of a public hearing date, the notice shall be given in accordance with the Colorado Municipal Annexation Act of 1965, as amended, and shall specifically direct copies of the annexation petition and the resolution initiating the annexation procedure by certified mail to the Clerk of the Larimer County Board of County Commissioners and to the Larimer County Attorney. Copies of the annexation petition and the resolution initiating the annexation procedure shall also be sent by certified mail to any school district or special district having territory within the annexed area. These copies shall be sent at least twenty-five (25) days prior to the public hearing.
4. The Planning Director or designee shall furnish the annexation map and the master plan to the following entities and may submit copies of the annexation map and the master plan to additional interested entities at their discretion. Such entities shall be advised by the Planning Director or designee of the scheduled hearing date and shall further be notified that any objections to the annexation and master plan must be submitted to the Town in writing no later than seven (7) days after receipt of the annexation map and master plan:
 - a. Telephone companies.
 - b. Franchise utility companies.
 - c. Town Engineer.
 - d. Fire Department.
 - e. Town Water and Sewer Department.
 - f. Colorado Department of Transportation.
5. Planning Commission Recommendation.
 - a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
 - b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
 - c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.
6. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of and inseparable from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.21.5 Annexation Impact Report.

- A. For all annexations in excess of ten (10) acres, the Town shall prepare an impact report regarding the proposed annexation not less than twenty-five (25) days before the date of the annexation hearing. One (1) copy of the impact report shall be filed with the Larimer County Board of County Commissioners within five (5) days thereafter. The preparation and filing of the annexation impact report may be waived upon approval of the Larimer County Board of County Commissioners.
- B. The annexation impact report shall include the following:
 1. A map or maps of the Town and adjacent territory showing the following information:
 - a. The present and proposed boundaries of the Town in the vicinity of the proposed annexation.
 - b. The present streets, major trunk water lines, sewer interceptors and outfalls, other utility lines and ditches and the proposed extension of such streets and utility lines in the vicinity of the proposed annexation.
 - c. The existing and proposed land use pattern in the areas to be annexed.
 2. A copy of any draft or final pre-annexation agreement, if available.
 3. A statement of the Town's plans for extending or providing for municipal services within the area to be annexed.
 4. A statement of the Town's plans for the financing of municipal services to be extended into the area to be annexed.
 5. A statement identifying all existing districts within the area to be annexed.
 6. A statement of the effect of the annexation upon the school district governing the area to be annexed, as is more fully set forth in Paragraph 15-1-30(d)(7) above. (Ord. 11-2007 §1)

2.21.6 Consideration of Annexation Ordinance. Upon the submission of documentation in accordance with this Chapter and upon compliance with the notice and hearing requirements as set forth in the Colorado Municipal Annexation Act of 1965, as amended,

the Town Board may consider the approval of an ordinance annexing the subject property to the Town. If the Town Board considers and disapproves the ordinance, no similar request may be heard for a period of one (1) year from the date of denial. (Ord. 11-2007 §1)

2.21.7 Findings for Approval.

1. The annexation is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
2. The annexation shall not create any additional cost or burden on then-existing residents of the Town to provide public facilities and additional community services in any newly-annexed area;
3. The applicant has demonstrated that they arranged with the school district regarding the dedication of school sites, or payment of fees in lieu of said dedication, as may be agreed to among the applicant, the school district, and the Town;
4. All existing and proposed streets in newly annexed territory shall be constructed in compliance with all current Town standards unless the Town determines that the existing streets will provide appropriate access during all seasons of the year to all lots fronting on each street; and that the curbs, gutters, sidewalks, bike lanes, culverts, drains, and other structures necessary to the use of such streets or highways are satisfactory or not necessary to promote public safety. The location, type, character and dimensions of all structures and the grades for all existing or proposed street work shall be subject to approval by the Town;
5. The annexation is in the best interest of the citizens of the Town of Wellington; and
6. The annexation is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.21.8 Final Submission. If the Town Board approves an annexation ordinance, the applicant shall submit to the Planning Department the final annexation map and master plan within ten (10) days of the effective date of the annexation ordinance. (Ord. 11-2007 §1)

2.22 Variance

2.22.2 Purpose. A variance provides relief from the strict application of a standard to a specific site that would create an unnecessary hardship or practical difficulties on all reasonable use of the property.

2.22.3 Applicability. Variances may be sought for relief from dimensional and numerical standards of this Land Use Code. Variances may not be sought to vary the allowed use on a property.

2.22.4 Procedure. All applications for Variances shall comply with the following specific procedures in addition to the general procedures set forth in Section 2.04.

A. *Pre-application Conference.* A pre-application conference is required for a variance application to discuss specific application procedures, criteria, and requirements for a formal application.

B. *Application Submittal.* The variance application shall include:

1. A site plan detailing property boundaries, footprints of all existing and proposed buildings, parking configuration, location of all utilities and easements, and any other details required to demonstrate conformance with all regulations and development standards applicable to the proposed zoning district;
2. A written narrative justifying why the proposed variance fits in with the surrounding neighborhood;
3. Conceptual building plans, including elevations, exterior materials, doors, decks, etc., if applicable;
4. Any other information identified in the pre-application meeting.

C. *Review and approval.*

1. Planning Commission Recommendation.

- a. The Planning Commission shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.
- b. The Planning Commission shall either recommend approval, approval with conditions, or denial of the application to the Town Board, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. A copy of the Planning Commission recommendation shall be sent to the Town Board with the applicant to be reviewed during a public hearing by the Town Board at a regularly scheduled board meeting.
- d. The review of a development permit may occur concurrently with review for a general rezone or other land development application.

2. Town Board Approval.

- a. The Town Board shall hold a public hearing and review the application at a regular meeting. Public notice shall be given pursuant to Section 2.02. The applicant or their representative may be present at the meeting to present the proposal. Staff shall present their staff report and recommendation.

- b. The Town Board shall either approve, approve with conditions, or deny the application, or continue the hearing pursuant to Section 2.02.4, with the requirement that the applicant submit changes or additional information which they find necessary to determine whether the application complies with the Town's regulations, goals, and policies.
- c. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Town Board shall be considered a part of, and inseparable from, the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.22.5 Findings for Approval.

- A. The relief requested is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. Strict application of the regulation will result in an unnecessary hardship and practical difficulties on all reasonable use of the land intended by the existing zoning, as opposed to convenience or benefit of the applicant or a specific application;
- C. The need for the variance is due to specific and unique physical conditions on the site that do not exist on similarly situated land in the area;
- D. The manner in which strict application of the regulation deprives the applicant of reasonable use of the land compared to other similarly situated land in the area;
- E. The circumstances warranting the variance are not the result of actions by the applicant, or could not be reasonably avoided by actions of the applicant;
- F. Granting the variance will not harm the public health, safety and welfare or the purposes and intent of these regulations;
- G. The relief requested is the minimum necessary to alleviate the hardship and practical difficulties; and
- H. The relief requested is consistent with any other prior approvals and official plans and policies created under the guidance of that plan for these areas (e.g., The Comprehensive Plan, specific area plans like a Downtown Corridor Study, etc.).

2.23 Appeals

2.23.2 Purpose. This section sets forth the process for appealing land use decisions made by any applicant, administrative official, board, or commission under this Code.

2.23.3 Applicability. An appeal application may be initiated by any person aggrieved by a final decision made by an administrative officer or agency, based upon or made in the course of the administration or enforcement of this Code. Appeals are made in accordance with C.R.S. § 31-23-307.

- A. Appeals may be taken by any officer, department, board, or commission of the Town affected by the grant or refusal of the building permit, or by other decision of the administrative officer or agency, based on or made in the course of administration or enforcement of this regulation.
- B. *Appeal of Administrative Decisions*. Appeals of all administrative decisions shall be to the Board of Adjustment.
- C. *Appeal of Planning Commission Decisions*. Appeals of all Planning Commission decisions shall be to the Town Board.
- D. *Appeal of Town Board Decisions*. Appeals of any final decision by the Town Board decisions made pursuant to this Code shall be to the District Court in the manner set forth in the Colorado Rules of Civil Procedure.

2.23.4 Procedure.

- A. *Pre-application Conference*. A pre-application conference is not required for an appeal of an administrative decision, but may be used to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Application Submittal*. Appeals shall be:
 - 1. Made in writing and submitted to the Planning Director stating the specifics of the appeal, the grounds for the requested relief, and include all pertinent records of the decision.
 - 2. Made within 7 days of the final decision.
 - 3. Demonstrate that the decision is final and that all other administrative remedies have been exhausted.
- C. *Review*. Upon receipt of a formal application staff will conduct an internal review and may supplement the application with any additional records on the decision.
 - 1. Upon submittal of a formal application, staff shall only review the application to confirm that it is complete and that the appeal is heard by the appropriate review body. The staff report shall not make a formal recommendation, but rather shall include only the necessary facts to warrant an appeal, which shall be provided by the appellant.
 - 2. The appellant has the burden of proving the necessary facts to warrant approval of an appeal by the appropriate decision-making body. Such proof shall be provided at time of a written application with the non-refundable application fee. If the appellant fails to provide facts warranting an appeal, the application shall be rejected.
 - 3. An appeal stays all proceedings from further action unless the Town Administrator determines that a stay would create adverse impacts to the health, safety, and welfare of the Town or subject neighborhood.
- D. *Public Hearings*.

1. The Town Board shall review the application subject to the criteria in this section. Upon the close of the public hearing the Town Board shall either affirm the decision of the administrative official or Planning Commission, affirm the decision of the administrative official or Planning Commission with specific conditions and modifications, overturn the decision of the administrative official or Planning Commission and make the decision that the Town Board determines should be made, or continue the application to collect additional information pertinent to the application or to take the matter under advisement.
 - a. If the hearing is postponed, new notice shall be required.
 - b. The continued hearing shall occur at the next Town Board regular meeting, or at some other time within 60 days with the consent of the applicant. No application may be postponed more than once by the Town Board without the applicant's consent.
2. No decision of the Town Board may exceed the authority granted to the administrative official or Planning Commission under these regulations,
3. The appeal authority may reverse a previous decision in whole or in part, or may modify the order, requirement, decision, or determination appealed from.
4. The appeal authority may attach conditions of approval on any appeal to ensure the health, safety, and welfare of the Town.

2.23.5 Findings for Approval. In reviewing and determining whether to affirm, reverse, or amend a decision of another decision-making body, the current decision-making body shall consider the following findings:

- A. Whether the decision of the administrative official or Planning Commission was a clear error, as opposed to fairly debatable, according to the provisions of these regulations.
- B. The interpretation instructions of these regulations.
- C. The purposes, intent, and design objectives of any standards that are subject to the appeal.
- D. The record on the application, including the official plans and policies of the Town used to evaluate the application or make the decision.
- E. Whether the final decision and the grounds for relief requested in the appeal are within the authority granted by these regulations.
- F. Whether there are other more appropriate and applicable procedures to achieve the applicant's proposed objective, such as a plan amendment, text amendment, planned zoning districts, a zoning map amendment, or a variance.

2.23.6 Post Decision Actions. Any further appeals from the appropriate appeal authority shall be made as provided by law.

2.24 Special Review

2.24.2 **Purpose.** Special Review approval provides an administrative process for approving permitted uses that have specific design standards associated with them

2.24.3 **Applicability.** Because of their unusual or special characteristics, special uses require review and evaluation so that they may be located properly with respect to their effects on surrounding properties. The review process prescribed in this section assures compatibility and harmonious development between conditional uses, surrounding properties and the Town's goals and policies. Special review uses may be permitted subject to compliance with standards specified in Chapter 4 to ensure compatibility with surrounding uses.

2.24.4 **Procedure.** All special review applications shall comply with the following specific procedures in addition to the general application procedures in Section 2.04.3.

- A. *Pre-application Conference.* A pre-application conference is optional for a conditional use application to discuss specific application procedures, criteria, and requirements for a formal application.
- B. *Land Use Application Submittal.* In addition to the requirements set forth in Section 2.04.3, a special review application shall include the following:
 - 1. A written statement and any graphics necessary to describe the precise nature of the proposed use and its operating characteristics and to illustrate how all conditional use review criteria have been satisfied.
 - 2. A map showing the proposed development of the site, including any applicable topography, building locations, parking, traffic circulation, usable open space, landscaped area and utilities and drainage features.
 - 3. Preliminary building plans and elevations sufficient to indicate the dimensions, general appearance, and scale of all buildings.
 - 4. Such additional material as the Planning Director or designee may prescribe or the applicant may submit pertinent to the application.
- C. *Review and Approval.*
 - 1. Administrative Approval.
 - a. The Planning Director or designee shall either approve, approve with conditions, or deny the application.
 - b. Any information, exhibits, plans or elevations, whether conceptual or detailed, that are part of the application approved by the Planning Director or designee shall be considered a part of, and inseparable from the approval. All development shall conform to the approved plans, unless otherwise provided for within this Land Use Code.

2.24.5 **Findings for Approval.**

- A. The use is consistent with the Comprehensive Plan and the intent stated in this Land Use Code;
- B. The use will be adequately served with public utilities, services and facilities (i.e., water, sewer, electric, schools, street system, fire protection, public transit, storm drainage, refuse collection, parks system, etc.) and not impose an undue burden above and beyond those of the permitted uses of the district.
- C. The use will not substantially alter the basic character of the district in which it is in or jeopardize the development or redevelopment potential of the district.
- D. The use will result in efficient on- and off-site traffic circulation which will not have a significant adverse impact on the adjacent uses or result in hazardous conditions for pedestrians or vehicles in or adjacent to the site.
- E. Potential negative impacts of the use on the rest of the neighborhood or of the neighborhood on the use have been mitigated through setbacks, architecture, screen walls, landscaping, site arrangement or other methods.
- F. The applicant has submitted evidence that all applicable local, state, and federal permits have been or will be obtained.

CHAPTER 3: ZONING DISTRICTS

3.01 Purpose and Organization

3.01.1 Purpose

This chapter describes each zone district and their associated dimensional requirements. In their interpretation and application, the provisions of these zoning regulations shall be held to be minimum requirements adopted for the promotion of the public health, safety, morals, convenience, comfort, prosperity and general welfare.

These zoning regulations are designed to:

- A. Encourage the most appropriate use of land through the Town and ensure a logical growth of the various physical elements of the Town.
- B. Regulate and determine the size of building lots, yards and other open spaces.
- C. Promote good design and arrangement of buildings or clusters of buildings and uses in residential, business and industrial development.
- D. Prevent the overcrowding of land, poor quality in development, waste and inefficiency in land use, danger and congestion in travel and transportation and any other use or development that might be detrimental to the stability and livability of the Town.
- E. Promote the health, safety, morals and general welfare of Town residents.

3.01.2 Uniformity of regulations.

The regulations established by this Article within each zone shall apply uniformly to each class or kind of structure or land. Unless exceptions are specified in this Article, the following interpretations shall apply:

- A. No building, structure or land shall be used or occupied, , changed, constructed, moved or structurally altered unless in conformity with all of the regulations herein specified for the zone in which it is located.
- B. No building or other structure shall be erected or altered to:
 - 1. Exceed the height limitations;
 - 2. Occupy a greater percentage of the area; or
 - 3. Have narrower or smaller rear yards, front yards, side yards or other open spaces.

- C. No yard or lot existing or approved at the time of adoption of this Land Use Code shall be reduced in dimension or area below the minimum requirements set forth herein. Yards or lots created after the effective date of the ordinance codified herein shall meet at least the minimum requirements established by this Chapter.

3.01.3 ¹Zoning Districts.

In order to carry out the provisions of this Code, the Town is divided into the following zoning districts:

Abbreviation	Title
Residential Zone Districts	
A	Agricultural District
R-1	Residential Rural Density District
R-2	Residential Low Density District
R-3	Residential Medium Density District
R-4	Downtown Neighborhood District
MH	Manufactured Home Park District
Commercial and Mixed-Use Zone Districts	
C-1	Community Commercial District
C-2	Downtown Core Commercial District
C-3	Mixed-Use Commercial District
Other Non-Residential Zone Districts	
LI	Light Industrial District
I	Industrial District
P	Public District
PUD	Planned Unit Development (PUD) District

3.01.4 Zoning District Map.

The boundaries and classifications of districts established are as depicted on the adopted Zoning District Map bearing the most recent date of publication which has been signed by the Chair of the Planning Commission and the Mayor.

¹ These provisions are included in Chapter 1 already

- D. *Interpretation of boundary lines.* If uncertainty exists, district boundaries shall be on section lines; lot lines; the center lines of highways, streets, alleys, railroad rights-of-way, rivers, streams, or such lines extended; or municipal corporation lines; Where a lot is divided by a zoning district boundary line either zone requirements may be extended within the lot for a distance of not more than twenty-five (25) feet as approved by the Planning Director.
- E. *Amendment upon zoning or modification.* Upon approval of any ordinance annexing and establishing zoning or modifying existing zoning for any property, the Town shall amend the prior existing Zone District Map to include the annexed area with the proper zoning classification or show the amended classification, as the case may be. Such updated, Zone District Map shall contain, in table form, the date and number of the ordinance amending it, the date the map was amended to reflect each amendment and the initials of the person who checked and approved the change to the map.
- F. *Cost for amending zoning.* Any person who proposes zoning for property being annexed or proposes modifying existing zoning shall bear the entire cost of amending the Zone District Map, including all notification costs. The Town shall provide applicants with a copy of the current fee schedule and fee agreement form.
- G. *Public inspection; storage of original.* The Zoning District Map shall be available and on display at the office of the Town Clerk during normal business hours.

3.02 Residential Zone Districts²

3.02.1 A – Agricultural District.

- A. *Intent.* The Agricultural District is an ultra low-density district intended for the pursuit of farm activities or for a transitional status. This zone is characterized by the growing of crops and related functions as well as large lot, rural, single-family detached residential dwellings and agritourism.
- B. *Principal uses.* Permitted principal uses in the A District shall be as listed in *Section 4.03 Table of Allowable Uses*.
- C. *Conditional uses.* Permitted conditional uses in the A District shall be as listed in *Section 4.03 Table of Allowable Uses*.

² Dimensional standards from Article 6, Dimensional Standards of existing code

3.02.2 R-1 – Residential Rural Density District.

- A. *Intent.* The Residential Rural Density District is a very low-density residential district intended for no more than two (2) single-family dwellings per acre and one (1) or more accessory buildings. This zone has been developed to provide for large-lot, detached single-family development in areas more characteristically rural and on the outskirts of the planning area that are supported by neighborhood amenities and public facilities.
- B. *Principal uses.* Permitted principal uses in the R-1 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the R-1 District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.02.3 R-2 – Residential Low Density District.

- A. *Intent.* The Residential Low Density District is intended primarily for detached and limited attached single-family uses on individual lots that are supported by neighborhood amenities and public facilities, with up to four attached units allowed per building and suggested net density ranges up to six dwelling units per acre. This zone is characterized by tree-lined local streets, an interconnected pedestrian circulation system, and proximity to schools and parks.
- B. *Principal uses.* Permitted principal uses in the R-2 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the R-2 District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.02.4 R-3 – Residential Medium Density District.

- A. *Intent.* The Residential Medium Density District is intended for a mix of small lot single-family detached dwellings, single-family attached dwellings, and multi-family dwellings intended to provide a walkable environment supported by motorized and non-motorized transportation options, parks, and public gathering spaces that are ideal for people in all stages of life. Multi-family buildings are generally encouraged near viable business centers in order to facilitate appropriate densities. Street and open space designs in these areas shall be used to create compatibility among frontages, which encourage pedestrian interaction and discourage high automobile speeds.

- B. *Principal uses.* Permitted principal uses in the R-3 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the R-3 District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.02.5 R-4 – Downtown Neighborhood District.

- A. *Intent.* The Downtown Neighborhood District is intended for the older neighborhoods adjacent to the downtown core that have smaller, more constrained lots than newer developments and specific architectural characteristics. These neighborhoods are intended to support a variety of housing types including detached and attached single family dwellings that complement the area's character as well as small-scale service establishments, that add vibrancy to the overall Downtown area. These areas are intended to be supported by a traditional, highly connected gridded street system with detached sidewalks, and that incorporate pocket parks and public gathering spaces..
- B. *Principal uses.* Permitted principal uses in the R-4 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the R-4 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- D. *Design Standards.* The following design standards shall apply to all new and infill development in the Downtown Neighborhood Zone District.
 - 1. Residential buildings shall include a front porch on each ground floor unit to ensure new construction blends with the existing neighborhood character. Porches shall be a minimum of six feet deep with a minimum overall dimension of forty-eight square feet and may encroach into the required front setback by up to six feet.

Figure #



2. New and infill buildings shall include characteristics of the traditional architectural styles of the Downtown Neighborhood Area identified as Craftsman, Victorian and Farmhouse. Such features could include:
- a. Gabled and cross-gabled rooflines;
 - b. Porches running the full length of the front façade
 - c. Rear loaded or detached garages that allow the front façade of the house to be the primary focus
 - d. Steeply-pitched rooflines, curlicue trims, ornate windows, and asymmetrical designs (Victorian);
 - e. Low-pitched rooflines with overhanging eaves, exposed rafters, and heavy, tapered columns (Craftsman); or
 - f. Simple design focusing on wood elements, board on batten siding and hand hewn timbers with a traditionally white color palette (Farmhouse).

Figure #



3.02.6 MH – Manufactured Home Park District.

- A. *Intent.* This is a high-density residential district on a parcel of land under single ownership or control on which two (2) or more manufactured homes are occupied as residences.
- B. *Principal uses.* Permitted principal uses in the MH District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Application procedure*
1. Standard process for a new mobile home park shall follow the standard rezone and Major Subdivision processes per Sections 1.07 and 1.17 of this Land Use Code.
 2. Redevelopment of an existing site with required infrastructure in place would need to follow the site plan application process per Section 1.12 of this Land Use Code.
- D. *Building design standards/.*
1. The manufactured home must be partially or entirely manufactured in a factory.
 2. The manufactured home must be not less than twenty-four (24) feet in width and thirty-six (36) feet in length.
 3. The manufactured home must be set on an excavated, backfilled, engineered foundation enclosed at the perimeter so that the top of the perimeter wall sits no more than twelve (12) inches above finish grade. The foundation shall be similar in appearance and durability to a masonry foundation of a site-built dwelling. The foundation shall provide an anchoring system for the manufactured home that is totally concealed under the structure.
 4. The exterior siding of the manufactured home must have the same appearance as materials commonly used on residential dwellings. Metal siding must be painted or anodized.
 5. The manufactured home must have a pitched roof with a pitch of at least a nominal three (3) in twelve (12). The roof must be covered with shingles, shakes or tile. Eaves of the roof must extend at least one (1) foot from the intersection of the roof and the exterior walls.
 6. The manufactured home must have windows that are wood, vinyl-coated or anodized aluminum.
 7. The manufactured home must have color-coordinated body and trim. Colors of both the factory components and the site-built components shall be the same.

8. The main entrance to the manufactured home must face or be oriented toward an adjacent street.
9. The transportation mechanisms, including the wheels, axles and hitch, must be removed.
10. No manufactured home shall be occupied for dwelling purposes unless it is properly placed in a manufactured home space and connected to water, sewerage, electric and gas utilities, as appropriate.
11. All manufactured homes shall be certified pursuant to the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. § 5401 et seq., or shall be certified by the Colorado Division of Housing pursuant to Section 24-32-701 et seq., C.R.S.
12. All manufactured homes shall have an enclosed crawlspace underneath the manufactured home and shall not provide a harborage for rodents or create a fire hazard. No enclosed crawlspace shall be used for storage unless the storage area is surfaced with concrete. Adequate access and ventilation shall be provided in accordance with the Guidelines For Manufactured Housing Installation.
13. All manufactured homes shall meet or exceed equivalent engineering standards for other single-family residences.
14. Additions to increase the floor area of manufactured home shall not be permitted except for patios, porches, garages, decks or carports. Garages may be detached or attached.
15. Prior to occupancy, the Building Inspector shall inspect each manufactured home to determine compliance with this Code. No occupancy shall be permitted or certificate of occupancy issued until said inspection and all connections to public utilities have been made. The owner or home builder shall pay to the Town a building permit fee for each residential structure as may be required by this Code. Installation procedures and the building permit fee shall be in accordance with the then current Guidelines for Manufactured Housing Installation, including appendices, published by the International Conference of Building Officials for manufactured homes and as adopted by the Town.
16. All additions shall comply with minimum yard requirements, and a building permit shall be required in advance for any such addition.

E. Site design standards.

1. All streets in a manufactured home park shall be dedicated to the Town and shall be maintained by the park owner or an owners' association.
2. All streets shall be a minimum width of twenty-two (22) feet from back of curb to back of curb, including the width of gutter pans.
3. Primary through streets shall be thirty-four (34) feet from back of curb to back of curb with a four-foot detached sidewalk on one (1) side being located six (6) feet from the back of curb.
4. The developer shall provide for covenants or other mechanisms, which shall be approved by the Town, ensuring that streets are maintained and replaced as required.
5. All streets within the manufactured home park shall be constructed to the Town standards.
6. A minimum of eight percent (8%) of the gross site area shall be reserved for and devoted to improved recreation areas and facilities provided in locations convenient to all manufactured home spaces.
7. A minimum of three hundred (300) square feet of outdoor living area shall be provided on each space.
8. Every manufactured home space shall have two (2) off-street parking spaces adjacent to the manufactured home. There shall be one (1) additional parking space for each manufactured home space within one hundred (100) feet for use by occupants and guests.
1. Off-street vehicle parking shall be provided for recreation facilities located within a manufactured home park. At a rate of one (1) space per two hundred fifty (250) square feet of gross floor area, plus one (1) space per employee at the maximum shift, Twenty (20) spaces are to be provided for every diamond or athletic field, or one (1) space for every four (4) spectator seats, whichever is greater. (One [1] seat is equal to two [2] feet of bench seating length.)
2. All off-street parking shall meet the provisions of Section 5.05 of this Land Use Code.
3. The developer shall provide for a system of pedestrian circulation within the development. The system shall connect with existing sidewalks, if any are adjacent to the property. The system shall be designed to link residential units with recreation facilities, school bus stops and existing sidewalks in the neighborhoods.

Attached and detached sidewalks within the manufactured home park shall be a minimum of five (5) feet in width.

4. All public utilities shall be installed in accordance with the applicable Town standards.
5. A manufactured home park may have multiple master meters for water service.
6. Each manufactured home space shall have its own meter for water and electrical service.

3.02.7 Table of Dimensional Standards for Residential Zone Districts

All primary and accessory structures are subject to the dimensional standards set forth in the table below. These general standards may be further limited or modified by other applicable sections of this Land Use Code. General rules for measurement and exceptions are in Chapter 9, Definitions.

Zones	A	R-1	R-2	R-3	R-4	MH
Lot Standards						
Minimum Site Area	5 acres	N/A	N/A	N/A	N/A	1 acre
Minimum Lot Area Per Dwelling	5 acres	0.5 acres	7,500 sq. ft.	3,000 sq. ft.	4,000 sq. ft.	2,400 sq. ft.
Maximum Net Density	0.2 du/acre	2 du/acre	6 du/acre	12 du/acre	12 du/acre	10 du/acre
Minimum Lot Width	120 ft.	120 ft.	60 ft.	50 ft.	40 ft. for detached, 25 ft. for attached	35 ft.
Principal Building Setbacks						
Minimum Front Yard	50 ft.	50 ft.	20 ft.	15 ft.	15 ft. ¹	10 ft.
Minimum Front Yard to Attached Garage	60 ft.	50 ft.	25 ft.	20 ft.	20 ft.	NA
Minimum Side Yard	20 ft.	20 ft.	7 ft.	7 ft.	5 ft.	5 ft.
Minimum Side Yard (Corner Lot)	20 ft.	20 ft.	15 ft. on nonentry side of corner lot	15' on nonentry side of corner lot	15' on nonentry side of corner lot	15' on nonentry side of corner lot
Minimum Rear Yard	5 ft.	20 ft.	20 ft.	10 ft.	15 ft.	10 ft.

Zones	A	R-1	R-2	R-3	R-4	MH
Minimum Rear Yard to Rear Entry Garage	20 ft.	20 ft.	20 ft.	20 ft.	20 ft.	20 ft.
Accessory Building and Detached Garage Setbacks						
Minimum Front Yard	60 ft.	60 ft.	35 ft.	35 ft.	35 ft.	25 ft.
Minimum Side Yard	20 ft.	20 ft.	7 ft.	7 ft.	5 ft.	5'
Minimum Rear Yard	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.
Deck and Patio Cover Setbacks						
Minimum Rear Yard	1 du	10 ft.	10 ft.	10 ft.	10 ft.	10 ft.
Building and Structure Standards						
Minimum Floor Area (above grade) Per Dwelling Unit	864 sq. ft.	864 sq. ft.	864 sq. ft.	864 sq. ft.	600 sq. ft.	480 sq. ft.
Maximum Building Height	35 ft.	35 ft.	35 ft.	35'	28' ft.	16 ft. Park-Owned Common Structures – 35 ft.
Minimum Distance Between Buildings	20 ft.	20 ft.	10 ft.	10 ft.	10 ft.	10 ft.
Maximum Dwelling Units Per Structure	1 du	1 du	1 du	12 du	12 du	1 du

1. Front porches may encroach into the front setback by up to six feet.

3.03 Commercial and Mixed-Use Districts

3.03.1 C-1 – Community Commercial District.

A. *Intent.* The Community Commercial District is intended for general commercial areas outside of downtown such as activity centers at intersections. These areas are intended to facilitate a variety of businesses that provide employment opportunities and support the retail and service needs of the community. Buildings may be located

within a unified campus-like setting integrated with sidewalks, landscaped features, and public spaces that promote access to motorized and non-motorized transportation options.

- B. *Principal uses.* Permitted principal uses in the C-1 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the C-1 District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.03.2 C-2 – Downtown Core Commercial District.

- A. *Intent.* The Downtown Core Commercial District is intended to preserve the character of the original downtown and to provide for a mixture of uses that will strengthen and expand the core community. As the Town's primary activity center, these areas are intended to be highly connected to an efficient network of motorized and non-motorized connections. Its character is based on historic and civic buildings, ample and landscaped sidewalks, groomed and activated alleys, public art, and gathering spaces – all design with a pedestrian scale perspective that gives the Downtown a unique sense of place and contributes to community pride. As property owners choose to reinvest in the Downtown, Main Street uses should encourage 'select' infill of vacant residential and commercial areas and slightly increase the height of existing buildings to support upper level residential uses.
- B. *Principal uses.* Permitted principal uses in the C-2 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the C-2 District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.03.3 C-3 – Mixed-Use Commercial District.

- A. *Intent.*
 - 1. The Mixed-Use Commercial District is intended to be a setting for development of a wide range of community and regional retail uses, offices and personal and business services, and it is intended to accommodate a wide range of other uses, including multi-family housing and mixed-use dwelling units. The C-3 District should integrate various commercial and multi-family uses while transitioning from the highway to adjacent lower density neighborhoods. The intent of mixed-use areas is to cluster residential and non-residential uses in a compact, walkable setting. These areas provide ease of movement through both

motorized and non-motorized transportation options offering convenient access for locals and visitors alike.

2. While some Mixed-Use Commercial District areas may continue to meet the need for auto-related and other auto-oriented uses, it is the Town's intent that the C-3 District emphasize safe and convenient personal mobility in many forms, with planning and design that accommodate pedestrians. Further, the C-3 District is intended to function with, rather than compete with, the Downtown District.
 3. The highway corridor is a visible commercial area of the community. Attention to the architectural standards outlined in Section 5.09 is required for approval.
- B. *Permitted uses.* Permitted principal uses in the C-3 District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the C-2 District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.03.4 Table of Dimensional Standards for Commercial Zone Districts

All primary and accessory structures are subject to the dimensional standards set forth in the table below. These general standards may be further limited or modified by other applicable sections of this Land Use Code. General rules for measurement and exceptions are in Chapter 9, Definitions.

Zones	C-1	C-2	C-3
Lot Standards			
Maximum Floor Area Ratio	1:1	2:1	1:1
Maximum Net Residential Density	12 du/acre	12 du/acre	12 du/acre
Building Setbacks			
Minimum Front Yard	25 ft.	0 ft.	25 ft.
Minimum Side Yard ¹	0 ft. ¹	0 ft.	0 ft. ¹
Minimum Rear Yard	20 ft.	25 ft. ²	20 ft.
Building and Structure Standards			
Maximum Building Height	35 ft.	35 ft.	45 ft.

3.04 Other Non-Residential Zone Districts

3.04.1 LI – Light Industrial District.

- A. *Intent.* The Light Industrial District is intended to provide locations for research and development-type offices that create minimal noise, smell, and road traffic., Development in the Light Industrial District should encourage the development of planned office and business parks that promote excellence in the design and construction of buildings, outdoor spaces, transportation facilities and streetscapes. Typically, light industrial areas should serve as a separator between heavier industrial and surrounding land uses, such as residential and commercial areas.
- B. *Principal uses.* Permitted principal uses in the LI District shall be as listed in *Section 4.03 Table of Allowable Uses*.
- C. *Limitations.* Any use in this District shall conform to the following requirements:
1. Dust, fumes, odors, smoke, vapor and noise shall be confined to the site and be controlled in accordance with the state air pollution laws.
 2. Approved outdoor storage areas, equipment and refuse areas shall be concealed from view from abutting rights-of-way and from adjoining residential districts.
 3. All off-street parking areas as defined herein shall be surfaced with poured in place concrete or asphaltic concrete. Approved outdoor storage areas as defined herein may be surfaced with minimum three-quarter inch diameter crushed rock or approved alternative material to a depth of at least four (4) inches. If a crushed rock or alternative material surface is used, the subgrade of such areas shall be treated to the specifications of the Town Engineer. Areas surfaced with crushed rock or approved alternative material shall be treated with dust retardants, as needed, and kept free of weeds, trash and other debris. Appropriate fire-lane aisles and, if required, fire hydrants shall be provided.
 4. Light fixtures in parking areas shall be hooded and mounted not more than twenty-five (25) feet above the ground level and oriented in such a manner so as not to shine into residential areas. Lighting shall conform to the requirements in Section 5.02 of this Code.
- D. *Conditional uses.* Permitted conditional uses in the LI District shall be as listed in *Section 4.03 Table of Allowable Uses*.

3.04.2 ³I – Industrial District.

- A. *Intent.* The Industrial District is intended to provide a location for a large format buildings for manufacturing, warehousing and distributing, indoor and outdoor storage. . Locations for this zone require good access to major arterial streets and adequate water, sewer and power. Industrial areas should generally be located interior to the large block of industrial/light industrial areas.
- B. *Principal uses.* Permitted principal uses in the I District shall be as listed in *Section 4.03 Table of Allowable Uses*.
- C. *Limitations.* Any use in this District shall conform to the following requirements:
 - 1. Dust, fumes, odors, smoke, vapor and noise shall be confined to the site and be controlled in accordance with the state air pollution laws.
 - 2. Approved outdoor storage areas, equipment and refuse areas shall be concealed from view from abutting rights-of-way and from adjoining residential districts.
 - 3. All off-street parking areas as defined herein shall be surfaced with poured in place concrete or asphaltic concrete. Approved outdoor storage areas as defined herein may be surfaced with minimum three-quarter inch diameter crushed rock or approved alternative material to a depth of at least four (4) inches. If a crushed rock or alternative material surface is used, the subgrade of such areas shall be treated to the specifications of the Town Engineer. Areas surfaced with crushed rock or approved alternative material shall be treated with dust retardants, as needed, and kept free of weeds, trash and other debris. Appropriate fire-lane aisles and, if required, fire hydrants shall be provided.
 - 4. Light fixtures in parking areas shall be hooded and mounted not more than twenty-five (25) feet above the ground level and oriented in such a manner so as not to shine into residential areas. Lighting shall conform to the requirements in Section 5.02 of this Code.
- D. *Conditional uses.* Permitted conditional uses in the I District shall be as listed in *Section 4.03 Table of Allowable Uses*.

3.04.3 P – Public District.

- A. *Intent.* The Public District is intended to identify and perpetuate the existence of public parks, playgrounds, recreation facilities and public and quasi-public buildings,

³ Replaced by new Downtown Neighborhood Zone District

whether publicly owned or leased. These areas are intended to support the community with accessible walkways, public gathering spaces, and motorized and non-motorized transportation connections and parking that accommodate a large influx of car and pedestrian traffic. Buildings may be small, mixed with other uses in Downtown, or large, providing joint facilities (library, recreation center, etc.) intermixed in residential or mixed-use areas. Civic areas should consider building design, materials, and durability; making developments timeless, and favoring form and function over cost. These areas should also leverage local public art to add beauty and pride to Wellington.

- B. *Principal uses.* Principal permitted uses in the P District shall be as listed in *Section 4.03 Table of Allowable Uses.*
- C. *Conditional uses.* Permitted conditional uses in the P District shall be as listed in *Section 4.03 Table of Allowable Uses.*

3.04.4 Table of Dimensional Standards for Residential Zone Districts

All primary and accessory structures are subject to the dimensional standards set forth in the table below. These general standards may be further limited or modified by other applicable sections of this Land Use Code. General rules for measurement and exceptions are in Chapter 9, Definitions.

Zones	LI	I	P
Lot Standards			
Maximum Floor Area Ratio	1:1	1:1	–
Building Setbacks			
Minimum Front Yard	25 ft.	25 ft.	–
Minimum Side Yard	10 ft.	20 ft.	–
Minimum Rear Yard	10 ft.	10 ft.	–
Building and Structure Standards			
Maximum Building Height	45 ft.	45 ft.	45 ft.

3.05 PUD – Planned Unit Development District.

A. *Intent.*

1. This Planned Unit Development (PUD) Overlay District is enacted pursuant to the Planned Unit Development Act of 1972 as amended (Section 24-67-101 et seq., C.R.S.). A PUD is an area of land, controlled by one (1) or more landowners, to be developed under unified control or unified plan of development for a number of

dwelling units, commercial, educational, recreational or industrial uses, or any combination of the foregoing, the plan for which does not correspond in lot size, bulk or type of use, density, lot coverage, open space or other restriction to the existing land use regulations. The PUD is intended to be used as an overlay zone district that supplements the underlying standard zone district.

2. The intent and purpose of this District is to permit and encourage innovative design and high quality, master-planned developments on parcels of land forty acres in size or larger. This District is created to allow and encourage compatible uses to be developed in accordance with a unified development plan in harmony with the environment and surrounding neighborhood.
3. PUDs are expected to preserve critical environmental resources, provide above-average open space and recreational amenities, including exceptional design and provide greater efficiency in the layout and provision of roads, utilities and other infrastructure.

B. *Permitted uses.*

1. Uses permitted in the PUD Overlay District shall be those uses permitted in the underlying standard zone district for the property.
2. An applicant for a PUD Overlay District may request modifications to the permitted uses of the underlying zone district to remove those uses that may be deemed incompatible or inappropriate for the overall PUD development. Conditional uses may be permitted if it can be demonstrated that such uses meet the conditional use review criteria for the underlying zone districts.

4

⁴ Moved to Chapter 2, Application Procedures

CHAPTER 4: USE REGULATIONS

4.01 Purpose and Organization

4.01.1 Purpose. **Table 4.02-1, Table of Allowable Uses** below lists the uses allowed within all zoning districts.

All uses are defined in **Chapter 9, Definitions**. Approval of a use listed in this article, and compliance with the applicable use-specific standards for that use, authorizes that use only. Development or use of a property for any other use not specifically allowed in this article and approved under the appropriate process is prohibited.

4.01.2 Organization. The uses permitted in each of the zoning districts established in the Use Table are defined as follows:

- A. Standards Column. The "Standards" column provides a reference to associated standards for certain uses Permitted by Right and for Conditional Uses. Where a blank space is in the column, there is no associated standard. Where "Y" is in the column, there are associated standards.

Table 4.01-1 Use Table Legend		
Symbol	Meaning	Description
P	Permitted by Right	A " P " in a zoning district column indicates that a use is permitted by right, provided that it meets the supplementary use standards referenced in the far right "Standards" column of the use table, if applicable. These uses are subject to all other applicable regulations of this Land Use Code.
C	Conditional Use	A " C " in a zoning district column indicates that a use requires conditional use review and approval by the Planning Commission and Town Board (see Chapter ***).
A¹	Accessory Use	An " A " in a zoning district column indicates that a use is permitted by right as an accessory use, provided that it meets any necessary supplementary accessory use standards.
T²	Temporary Use	A " T " in a zoning district column indicates that a use requires temporary use review and approval by the Planning Commission ³ (see Chapter ***). Temporary uses must also follow any necessary supplemental temporary use standards.
	Use not Permitted	A "blank cell" in a zoning district column indicates that a use is not permitted as a primary use or conditional use in the zoning district.
Use Not Listed	See Section B., <i>Unlisted Uses</i> , below	

Note: The Use Table only establishes the principal uses allowed in each zoning district. See also Accessory and Temporary Use regulations in Chapter 4.

¹ Please direct the consultant team on if staff wants to see P and C only or to include A and T?

² See comment above.

³ Should this be the PC or TB?

B. Unlisted Uses. If a proposed use is not specifically listed in the **Use Table**, the Planning Director shall determine whether the use is permitted or not permitted. This determination shall be based upon the similarity in nature and character to one or more uses that are listed in the Use Table. In making this determination, the Planning Director may refer to the following factors as guidance:

1. Criteria for Use Determination.

- Whether the use has similar visual, traffic, environmental, parking, employment, and other impacts as an expressly listed use. The Planning Director may refer to empirical studies or generally accepted planning or engineering sources in making this determination. The burden is on the applicant to establish that the use is similar to the expressly listed use; or
- Whether the use is within the same industry classification as another permitted use. In making this determination, the Planning Director may refer to the most recent edition of the North American Industry Classification Manual (Executive Office of the President, Office of Management and Budget, 2017)(“NAICS”). If the use is not defined in the NAICS, the Administrator may refer to the American Planning Association, Land-Based Classification Standards LBCS Tables (April 1, 2001).

2. If Not Authorized Then Prohibited. If the Planning Director determines that a proposed use does not fit within a given use type and is not functionally the same as a permitted, accessory, conditional, or temporary use, then the use is a prohibited use.

4.02 Table of Allowable Uses

This chapter shall follow the requirements established in **Table 4.02-1, Table of Allowable Uses**.

Table 4.02-1 Table of Allowable Uses													
Use	Zoning District												
	Open	Residential					Commercial			Industrial		Misc.	Use Specific Standards
	A	R-1	R-2	R-3	R-4	MH	C-1	C-2	C-3	LI	I	P	
Residential													
Manufactured Home ⁴	P	P	P		P	P							Y
Mixed-Use Dwelling					P		P	P	P				
Multi-Family Dwelling				P	C				P				Y
Single-Family Attached Dwelling	C		P	P	P								Y
Single-Family Detached Dwelling	P	P	P	P	P								
Group Living / Lodging													

⁴ Additional specific use regulations to be proposed in R-2 and R-4

Bed and Breakfast				C	C		C						
Boarding and Rooming House				C	C				P				Y
Group Home		P	P	P	P				P				
Hotel/Motel							P	C	P	P			
Long-Term Care Facilities				C			C		P				
Agriculture													
Agriculture	P	P									C		
Greenhouse/Nursery									P	P			
Stable	P	P											Y
Commercial / Office													
<i>Animal Services</i>													
Kennel	C								P	P			Y
Veterinary Facilities, Large animals	P								C	C	P		Y
Veterinary Facilities, Small animals	P						P		P	P			Y
<i>Food</i>													
Brew Pub, Distillery Pub, or Limited Winery					C		P	P	P	P			Y
Food Catering									P	P			
Grocery Store							P	C	P	C			Y
Open-Air Farmers' Market								P	P	P			
Restaurant, Fast Food							P		P	C			Y
Restaurant, Fast Food with Drive-Thru							C		P	C			Y
Restaurant, Sit-down							P	P	P	P			Y
<i>Entertainment / Recreation</i>													
Adult Entertainment Establishments											P		Y
Art Studio					C		P	P	P	P	P		
Bar/Tavern							P	P	P	P	P		Y
Club/Lodge							P	C	P				
Entertainment Facility							P		P				
Golf Course	P	P	P						C			P	Y

Nightclub								P	P	P		Y
Recreational Entertainment, Indoor								P	P	P	P	
Recreational Entertainment, Outdoor								P	P	P		Y
Tourist Facilities								P	P		P	
<i>Retail Sales / Personal Services</i>												
Building and Landscaping Materials Supply								C	C	P	P	
Child Care Center					C			P	P	P		
Convenience Store								P	P	P	P	Y
Convenience Store with fuel sales								P	P	P		Y
Financial Institution								P	C	P		Y
Health and Membership Club								P	C	P	P	
Pawn Shop								P	P	P		Y
Personal Services					C			P	P	P	C	
Print Shop									P	P		
Retail Store								P	P	P		Y
<i>Office</i>												
Professional Office					C			P	P	P	P	
<i>Automotive</i>												
Car Wash								P	P	P		Y
Heavy Equipment Sales and Rental	C									P		Y
Motor Vehicle Dealership									P	P		Y
Motor Vehicle Repair, Heavy										P		Y
Motor Vehicle Repair, Light								P	P	P		Y
Motor Vehicle Storage										P	P	
Service Station								C	P	P	P	Y

<i>Marijuana⁵</i>													
Medical Marijuana Store									P				Y
Retail Marijuana Store									P				Y
Industrial / Natural Resources													
Brewery, Distillery, or Winery								C	C	P	P	P	Y
Commercial Dry Cleaning Facility											C	P	
Contractor and Contractor Storage											C	P	Y
Industrial and Manufacturing, Heavy												P	Y
Industrial and Manufacturing, Light										C	P	P	Y
Mini-Storage Facility										C	P	P	Y
Research and Development										C	C	P	
Resource Extraction	C											P	C
Wholesale Distribution, Warehousing, and Storage											P	P	
Workshop									C	C	P	P	Y
Institutional / Civic / Public													
<i>Death Care Services</i>													
Cemetery	P	P										P	Y
Funeral Services								C		P	P		Y
<i>Education</i>													
College								P	C	P	P		
School												P	
Technical School								P	C	P	P		Y
<i>Assembly</i>													
Community Facility		P	P	P	P			P		P	P		
Religious Land Use	C	P	P	P	P			C		P			
<i>Government / Non-Profit</i>													

⁵ Rely on staff to determine the appropriate zoning district allowance.

Civic Space	P	P	P	P	P		P	P	P	P		P	
Public Facilities	C						C	C	C	C	C	P	
<i>Medical</i>													
Medical Care Facility									P	P			
Medical Office							P	C	P				Y
Infrastructure													
<i>Transportation / Parking</i>													
Airport											C	C	Y
Off-Street Parking Facility							C	P	C	P	P	P	Y
Transit Facilities									P			P	
<i>Communications</i>													
Communication Facility	C									C	C	C	Y
Wireless Telecommunications Facility	C									C	C	C	Y
<i>Waste-Related</i>													
Recycling Facility											P		
Salvage Yard											C		Y
Solid Waste Facility											C	C	Y
Accessory Uses													
Accessory Building	P	P	P	P	P	P							Y
Accessory Dwelling Unit	P	P	P		P				P				Y
Accessory Use	P	P	P	P	P	P	P	P	P	P	P	P	Y
Home Occupation	P	P	P	P	P	P		P	P				Y

4.03 Use Specific Standards⁶

4.03.1 Adult Entertainment Establishments⁷.

- A. Operation. It shall be unlawful to operate or cause to be operated a sexually oriented business in violation of any of the following restrictions:

⁶ Some Use Specific Standards may change within the next few months as changes in the use table are revised by the staff, stakeholders and the public.

⁷ Carried forward existing regulations. We will review and flesh these uses in the ensuing weeks.

1. Zoning district. Sexually oriented businesses are only allowed in the Industrial District if approved as a conditional use.
 2. Distance restriction. It is unlawful to operate or cause to be operated a sexually oriented business within seven hundred fifty (750) feet, measured in a straight line, without regard to intervening structures, objects or Town limits, from the closest exterior wall of the structure in which the sexually oriented business is located to the property line of any of the following:
 - a. A religious land use;
 - b. A use approved for residential purposes;
 - c. A school or licensed child care facility; or
 - d. A park, recreational center, or community center.
 3. Single building restriction. No sexually oriented business shall be operated in the same building, structure or portion thereof as any other sexually oriented business.
 4. Discontinued operations. A sexually oriented business lawfully operating is not rendered a nonconforming use by the subsequent location of any use outlined in Paragraph (1) above; however, if the sexually oriented business ceases operation for a period of sixty (60) days or more regardless of any intent to resume operation, it may not recommence operation in that location. (Ord. 4-2005 §1; Ord. 11-2007 §1)
- B. Definitions. The following definitions shall apply to this Article.
1. *Adult bookstore, adult novelty store or adult video store* means a commercial establishment which devotes a significant or substantial portion of its stock-in-trade, advertising, floor space, shelf space or storage space to, or receives a significant or substantial portion of its revenues from, any one (1) or more of the following:
 - a. The sale, rental or viewing (for any form of consideration) of books, magazines, periodicals or other printed matter, or photographs, films, motion pictures, video cassettes, slides or other visual representations which are characterized by an emphasis upon the depiction, description, display or exhibition of specified sexual activities or specified anatomical areas; or
 - b. The sale or rental of instruments, devices or paraphernalia which are designed for use in connection with, or marketed primarily for engaging in, specified sexual activities, excluding condoms and other medically recognized birth control devices and disease-prevention products.
 2. *Child care facility*⁸ means any facility, by whatever name known, licensed by the State and maintained for compensation, for the whole or any part of a day, for the care of five (5) or more

⁸ We will find the statutes and apply the appropriate definitions and cross reference accordingly.

children under the age of sixteen (16) years who are not related to the owner, operator or manager thereof.

3. *Community center* means a building or other structure which is Town-owned or used by the Town that provides services to the community and is open to the general public.
4. *Park* means a park, reservation, playground, recreation area, bikeway, trail, greenbelt or other area in the Town owned or used by the Town or landowner's association and devoted to use as a park, reservation, playground, recreation area, bikeway, trail, greenbelt for members of that association and devoted to active or passive recreation, including developed and undeveloped land.
5. *Residential property* means any area subdivided and approved by the Town for residential land use or any property or lot devoted to full-time residential use.
6. *School* means a facility that provides a curriculum of elementary and secondary academic instruction, including kindergartens, elementary schools, junior high schools and high schools.
7. *Sexually oriented business or adult entertainment establishment* means:
 - a. Any business where individuals appear in a state in such a manner as to intentionally display specified anatomical areas or which encourages specified sexual activities, whether as the primary, or principal, use of the premises or whether as a secondary, or incidental or accessory, use of the premises for the purpose of entertaining the patrons of such establishments (but not including performances in which persons appear in a state of nudity and which, taken as a whole, contain serious literary, artistic, political or scientific value).
 - b. An adult bookstore, adult novelty store or adult video store.
8. *Specified anatomical areas* means:
 - a. Less than completely and opaquely covered human genitals, pubic region, buttocks, anus or female breasts below a point immediately above the areolae; or
 - b. Human male genitals in a discernibly turgid state, even if completely and opaquely covered.
9. *Specified sexual activities* means:
 - a. Human genitals in a state of sexual stimulation, tumescence or arousal;
 - b. Acts, actual or simulated, of human masturbation, sexual intercourse, oral copulation, bestiality or sodomy;
 - c. Fondling or other erotic touching of human genitals, pubic region, buttocks, anus or female breast;
 - d. Flagellation, mutilation, sadism, sadomasochism or torture for purposes of sexual arousal, gratification or abuse; and
 - e. Excretory functions as part of or in connection with any of the activities set forth in Subparagraphs a through d of this definition. (Ord. 4-2005 §1; Ord. 11-2007 §1)

- C. Hours of Operation. Sexually oriented businesses may only operate from the hours of 7:00 a.m. to 12:00 a.m. each day. Businesses falling within the definition of a sexually oriented business may be open for such additional hours as their owners in their discretion desire, provided that no activities carried on by a sexually oriented business may be available during such additional hours, that is other lawful activity not involving sexually oriented businesses may freely occur. (Ord. 4-2005 §1; Ord. 11-2007 §1)
- D. Premises. Sexually oriented businesses shall only conduct or offer sexually oriented business activities indoors (within an enclosed structure), and no sexually oriented business may permit or cause any sexually oriented business activity from outside the structure in which it is enclosed. (Ord. 4-2005 §1; Ord. 11-2007 §1)
- E. Age Limits. No one under eighteen (18) years of age shall be admitted to or be present in any adult entertainment establishment from the hours of 7:00 a.m. to 12:00 a.m. on any day. This minimum age limitation also applies to any employees, agents, servants or independent contractors working on the premises. Notice of this minimum age limitation shall be posted prominently outside all entrances to any adult entertainment establishment. (Ord. 4-2005 §1; Ord. 11-2007 §1)
- F. Signage and Exterior.
 - 1. In addition to the other requirements of this Code or the Land Use Code, it shall be unlawful for the owner or operator of any sexually oriented business or any other person to erect, construct or maintain any sign for the sexually oriented business other than one (1) primary sign and one (1) secondary sign, as provided herein.
 - 2. Primary signs shall have no more than two (2) display surfaces. Each such display surface shall:
 - a. Be a flat plane, rectangular in shape;
 - b. Not exceed seventy-five (75) square feet in area; and
 - c. Not exceed ten (10) feet in height or ten (10) feet in length. (Ord. 4-2005 §1; Ord. 11-2007 §1)
 - 3. No rope lights, neon lights, flashing lights, search lights are part of the exterior.

4.03.2 Airport.

- A. An Airport shall have a twenty (20) acre minimum property size for the overall site, and buildings and structures directly related to aircraft operations, storage, and/or passenger processing.
- B. The Airport shall comply with all Federal Aviation Administration regulations including but not limited to runway design, noise standards, and height limitations.

4.03.3 Bar/Tavern⁹.

- A. No Bar/Tavern shall be located within five hundred (500) feet of any residential district or use.
- B. 4.03.3.A does not apply to any Bar/Tavern located in C-2 Zone.

⁹ Provided basic distancing requirements
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4.03.4 Bed and Breakfast¹⁰.

- A. The owner shall always occupy and manage any Bed and Breakfast.
- B. The maximum number of rented bedrooms is five (5).
- C. The maximum length of stay for any guest is fourteen (14) consecutive days in any one calendar month.
- D. The Bed and Breakfast owner is responsible for the collection of all applicable Town and County taxes.
- E. Only breakfast may be served on the premises only for Bed and Breakfast guests and employees.
- F. No other meals shall be provided for guests on the premises.
- G. Guestrooms shall not be equipped with cooking facilities including, but not limited to, stoves, hot plates, or microwave ovens.
- H. No Bed and Breakfast shall be located within one thousand (1,000) feet of any other Bed and Breakfast.

4.03.5 Brewery, Distillery, or Winery¹¹.

- A. No Brewery, Distillery, or Winery shall be located within five hundred (500) feet of any residential district.
- B. A Brewery, Distillery, or Winery shall have a five (5) acre minimum parcel size.
- C. A Brewery, Distillery, or Winery includes on-site consumption as a primary or secondary use, which includes a minimum of twenty-five percent (25%) of the gross floor area.
- D. A Brewery, Distillery, or Winery may include other secondary uses like retail sales or outdoor events.
- E. A Brewery, Distillery, or Winery is limited to three hundred (300) guests.
- F. Outdoor events associated within a Brewery, Distillery, or Winery's operations are limited to Sunday through Thursday 11 am to 8 pm, and Friday through Saturday 10 am to 11 pm.
- G. All Breweries, Distilleries, or Wineries shall utilize best management practices and available technology to minimize potential adverse odors associated with the use.
- H. All waste shall be managed, treated, stored, and/or disposed of in accordance with Local, County, State, and Federal rules, regulations, and ordinances pertaining to waste.

4.03.6 Boarding and Rooming House¹².

- A. No more than ten (10) occupants (including any resident staff and family) shall occupy any boarding house at one time.
- B. The maximum length of stay for any guest is fourteen (14) consecutive days in any one calendar month.

¹⁰ Provided new standards that are simple and on par with the surrounding jurisdictions

¹¹ Needs standards to alleviate the CUP requirement

¹² Provided general standards that are on par with other cities

- C. No meals shall be provided for guests on the premises.
- D. No Boarding and Rooming House shall be located within one thousand (1,000) feet of any other Boarding and Rooming House.

4.03.7 Brew Pub, Distillery Pub, Limited Winery.

- A. No Brew Pub, Distillery Pub, or Limited Winery shall be located within two hundred fifty (250) feet of any residential district or use.
- B. 4.03.7.A does not apply to any Brew Pub, Distillery Pub, or Limited Winery located in C-2 Zone.
- C. No Brew Pub, Distillery Pub, or Limited Winery shall be located within five hundred (500) feet of any other Brew Pub, Distillery Pub, or Limited Winery.
- D. Overhead doors servicing trucks for loading and unloading materials shall not face streets unless they are set back at least one hundred (100) feet from the street.
- E. Service trucks for the purpose of loading and unloading materials and equipment or removing wastes shall be restricted to the hours between 8:00 AM and 8:00 PM.
- F. No outdoor storage is permitted, including parking and storage of vehicles associated with the business.

4.03.8 Building and Landscaping Materials Supply.

- A. C-1 and C-3 Zones.
 - 1. No Building and Landscaping Materials Supply shall be located within five hundred (500) feet of any residential use or district.
 - 2. Outdoor display, storage, sales, or rental of building and landscaping materials shall be screened.
 - 3. Screening for outdoor display, sales, or rental of building and landscaping materials shall be constructed from concrete or masonry and be at least six (6) feet tall.
 - 4. No screening wall shall exceed ten (10) feet tall.
 - 5. Only outdoor storage may exceed the ten (10) foot screening height requirement. Screening for storage may be constructed from concrete, masonry, or an approved alternative by the Director.
 - 6. In no instance shall any outdoor display, storage, sales, or rental of building and landscaping materials be stacked higher than the required concrete or masonry screening wall.
 - 7. No materials for sale shall be displayed between the principal structure and the front property line.

4.03.9 Car Wash¹³.

- A. No Car Wash shall be located within two hundred fifty (250) feet of any residential use or district.
- B. A Car Wash shall not be open for business between the hours of 10:00 PM and 7:00 AM.

4.03.10 Cemetery¹⁴.

¹³ Provided spacing standards.

¹⁴ Proposed standards since they want to allow this use in R1

- A. A Cemetery shall have a two (2) acre minimum property size.
- B. No structure, excluding fences or walls, shall be located within one hundred (100) feet from any residential use.
- C. Graves and monuments shall set back at least twenty feet (20) from any property line.
- D. All cemeteries shall be platted according to **Chapter 6, Subdivision**.

4.03.11 Communication Facility¹⁵.

- A.
- B.

4.03.12 Contractor and Contractor Storage.

- A. All outdoor storage areas shall be located at least one hundred (100) feet from any property line.
- B. All structures shall be located at least fifty (50) feet from any property line.
- C. The minimum property size for a Contractor and Contractor Storage shall be two (2) acres.
- D. Outdoor storage areas shall be screened and comply with Chapter 4.04.5.D.
- E. Maintenance of vehicles or machinery shall be incidental to the Contractor and Contractor Storage and the incidental use shall only include minor repair.
- F. Office space shall be incidental to the Contractor and Contractor Storage and shall comply with Chapter 4.04.5.C.
- G. No retail sales associated with a Contractor and Contractor Storage may occur on the property unless retail sales are approved with a different use that allows retail sales.
- H. No on street parking of vehicles or equipment associated with the use is allowed.
- I. Hours of operation are limited between the hours of 7:00 AM and nine 9:00 PM.

4.03.13 Convenience Store.

- A. C-1 and C-2 Zones.
 - 1. No Convenience Store shall be located within one hundred (100) feet of any residential use or district.
 - 2. No Convenience Store shall exceed two thousand (2,000¹⁶) square feet in building area.
 - 3. No Convenience Store shall be located within two hundred fifty (250) feet of any other Convenience Store.
 - 4. No outdoor display is permitted.
 - 5. Drive-thrus are not permitted.
- B. C-3 and LI Zones.

¹⁵ This use left blank as we will fill this section in with more input from staff and consultant best practices.

¹⁶ U.S. average convenience store size is ~ 2,800 sf. I'd imagine Wellington has smaller convenience store sizes than the US average.

1. No Convenience Store shall be located within fifty (50) feet of any residential use or district.
2. Drive-thrus may be allowed if the following requirements are met:
 - a. The Convenience Store is located two hundred fifty (250) feet from any residential district or use.
 - b. The Convenience Store is less than two thousand (2,000) square feet in building area.
 - c. A drive-thru lane is provided on site.
 - d. The drive-thru lane is at least ten (10) feet wide.
 - e. The drive-thru lane provides at least three (3) vehicle stacking spaces before the drive-thru window.
 - f. Vehicle stacking spaces shall be ten (10) feet wide by twenty (20) feet long.

4.03.14 Convenience Store, with fuel sales¹⁷.

A. All Zones.

1. Convenience Store, with fuel sales shall not be located within one hundred (100) feet of any residential use or district.
2. Any pump island or other structure shall be setback a minimum of twenty (20) feet from adjacent property lines or street and highway right-of-way lines.
3. Overhead canopies or weather protection structures shall be setback a minimum of ten (10) feet from adjacent property lines or street and highway right-of-way lines.
4. Outdoor display is only limited to ice chests, vending machines, secured propane tank storage, and firewood storage.
5. Drive-thrus are not permitted.

B. C-1 Zone.

1. No Convenience Store, with fuel sales shall exceed two thousand (2,000) square feet in building area.
2. No Convenience Store, with fuel sales shall be located within two hundred fifty (250) feet of any other Convenience Store, with fuel sales.
3. The total fuel pumps shall not exceed four (4).

4.03.15 Financial Institution¹⁸.

A. All Zones.

1. Drive-thrus/ATMs may be allowed if the following requirements are met:
 - a. The Financial Institution is located one hundred fifty (100) feet from any residential district or use.

¹⁷ Do we really need this distinction? Why not just make one category with the specific use standards regulating fuel sales (i.e. fuel are allowed only in C1, C3, and LI)? Also, there's a service station use. What's the difference between the two?

¹⁸ Insert size requirements, drive thru specs (drive thrus may be included in accessory uses though)

- b. A drive-thru/ATM lane is provided on site.
- c. The drive-thru/ATM lane is at least ten (10) feet wide.
- d. The drive-thru/ATM lane provides at least four (4) vehicle stacking spaces before the drive-thru window/ATM.
- e. Vehicle stacking spaces shall be ten (10) feet wide by twenty (20) feet long.
- f. The Financial Institution shall not exceed three (3) drive-thru/ATM lanes.

B. C-2 Zone.

- 1. No Financial Institution shall exceed two thousand (2,000) square feet in building area.
- 2. No Financial Institution shall be located within two hundred fifty (250) feet of any other Financial Institution.
- 3. Drive-thrus are not permitted.

4.03.16 Funeral Services¹⁹.

- A. Funeral Services including a Cemetery shall follow the requirements established in Chapter 4.03.10.
- B. Funeral Services shall be located at least five hundred (500) feet from any residential district or use.
- C. Funeral Services including cremation or embalming shall follow the additional requirements below.
 - 1. Prior to the issuance of a certificate of occupancy, the Funeral Services operator shall provide documentation of the issuance of all applicable federal, state, and local permits and provide all the equipment manufacturers' specifications for construction, installation, operation, and maintenance.
 - 2. Funeral Services shall be constructed, installed, operated, and maintained in accordance with all manufacturers' specifications and all applicable federal, state, and local permits. Town inspectors shall have the right to enter and inspect the operations to determine compliance with this provision.
 - 3. Each incinerator shall have a modern automated control panel and a dedicated natural gas meter.
 - 4. The height of the exhaust stack shall be a minimum of two (2) feet above the roof line or other nearby obstruction to minimized downdrafts of the exhaust.

4.03.17 Golf Course²⁰.

- A. The designed centerline of each hole shall be a minimum of one hundred (100) feet from adjacent property boundaries to reduce the potential of golf balls exiting the subject property.
- B. Appropriate controls, like netting, shall be installed to prevent golf balls from exiting the subject property.
- C. Total lot coverage with principal and accessory buildings shall not exceed twenty five percent (25%).
- D. Residential uses on the subject property are prohibited.

¹⁹ Regs that mitigate effects in C1.

²⁰ Standards provided for screening, separation, lighting, etc.

- E. No principal or accessory building, swimming pool, or tennis court shall set back less than (50) feet from any property line.
- F. All exterior lighting for the purposes of illuminating the golf course or any accessory use shall terminate at 10:00 PM. Lighting for walls, security measures, sconces, and parking facilities are excluded from this requirement.

4.03.18 Grocery Store²¹.

- A. C-1 Zone.
 - 1. Any Grocery Store exceeding 15,000 square feet shall require a Conditional Use Permit.
- B. C-2 Zone.
 - 1. Any Grocery Store exceeding 10,000 square feet shall require a Conditional Use Permit and meet the following standards.
 - a. No drive-thrus are permitted.
 - b. No Grocery Store shall be located within five hundred (500) feet of any other Grocery Store.
- C. C-3 and LI Zones.
 - 1. Any Grocery Store exceeding 25,000 square feet shall require a Conditional Use Permit.

4.03.19 Heavy Equipment Sales and Rental.

- A. No Heavy Equipment Sales and Rental use shall be located within one thousand (1,000) feet of any residential use or district.
- B. Outdoor display, storage, sales, or rental of heavy equipment shall be screened.
- C. Screening for heavy equipment shall be constructed from concrete or masonry and be at least six (6) feet tall.
- D. No screening wall shall exceed twelve (12) feet tall.
- E. No outdoor display, storage, sales, or rental of heavy equipment shall be taller than the required concrete or masonry screening wall unless located in the rear of the site. If located in the rear, outdoor display, storage, sales, or rental of heavy equipment shall not exceed twenty (20) feet tall.
- F. No materials for sale shall be displayed between the principal structure and the front property line.

4.03.20 Home Occupation²².

- A. A Home Occupation shall meet the following requirements.
 - 1. The use shall be conducted entirely within a dwelling and carried on by the inhabitants of the dwelling. Except for daycare²³ businesses which shall be allowed to commence operations as of

²¹ Insert size requirements, drive thru specs,

²² Carried forward existing regulations.

²³ We will comb through state statutes to ensure regulations comply with recent amendments.

6:00 a.m. the hours of operation during which clients or customers are allowed to come to the home in connection with the business activity are limited to between 8:00 AM and 9:00 PM.

2. The use shall be clearly incidental and secondary to the use of the dwelling and shall not change the dwelling's character.
3. The total area used for a Home Occupation shall not exceed one-half ($\frac{1}{2}$) the floor area of the user's dwelling unit.
4. There shall be only the incidental sale of stocks, supplies or products conducted on the premises.
5. There shall be no exterior storage on the premises of material or equipment used as a part of the Home Occupation.
6. There shall be no offensive noise, vibration, smoke, dust, odors, heat, or glare noticeable at or beyond the property line.
7. A Home Occupation shall provide additional off-street parking areas adequate to accommodate all needs created by the Home Occupation.

B. A Home Occupation shall not include the following:

1. Animal hospital;
2. Long-term care facility;
3. Restaurant;
4. Bed and breakfast;
5. Group home;
6. Pawn shop;
7. Adult-oriented use; or
8. Vehicle repair, servicing, detailing or towing if vehicles are:
 - a. Dispatched from the premises;
 - b. Are brought to the premises; or
 - c. Are parked or stored on the premises or on an adjacent street.

C. Licensing.

1. A Home Occupation shall be permitted only after the owner or inhabitant of the dwelling in which the occupation is conducted has obtained a home occupation license and business license from the Town.
2. The license fee shall be an amount established by resolution by the Board of Trustees to offset the Town's cost.
3. At the time ownership of the property is transferred, or the Home Occupation is discontinued for a period of six (6) months or more, the home occupation license terminates.
4. Following termination, the license may be issued again upon the submission and review of a new application and the payment of an additional fee.

5. If the Town is investigating a violation of this Land Use Code with respect to the particular home occupation at the time the renewal application is made, the license will not be reissued until the investigation is completed and, if necessary, all violations have been corrected.
6. The term of the previous license shall continue during the period of investigation.

4.03.21 Hotel/Motel.

A. C-1 Zone.

1. A Hotel/Motel shall be located at least two hundred fifty (250) feet from any residential district or use.
2. A Hotel/Motel is restricted to one story.
3. A Hotel/Motel shall not exceed 15,000 square feet.

4.03.22 Any Hotel/Motel exceeding 15,000 square feet requires a Conditional Use Permit. Industrial and Manufacturing, Heavy.

- A. An Industrial and Manufacturing, Heavy use shall be located at least one thousand (1,000) feet from any residential district or use.
- B. Any Industrial and Manufacturing, Heavy use producing and curating toxic chemicals or conducting animal slaughtering shall be located at least:
 1. Two thousand six hundred forty (2,640)²⁴ feet from any residential district, religious land use, medical care facility, or school.
 2. One thousand three hundred twenty (1,320)²⁵ feet from any commercial use.
 3. Six hundred sixty (660)²⁶ feet from any Industrial and Manufacturing, Light use.

4.03.23 Industrial and Manufacturing, Light.

A. Industrial Zones.

1. An Industrial and Manufacturing, Light use shall be located at least two hundred fifty (250) feet from any residential district or use.
2. Overhead doors shall not face streets unless set back at least one hundred (100) feet from the street.

B. Commercial Zones.

1. An Industrial and Manufacturing, Light use shall be located at least five hundred fifty (500) feet from any residential district or use.
2. No Industrial and Manufacturing, Light use shall be located within two hundred fifty (250) feet of any other Industrial and Manufacturing, Light use.
3. Overhead doors shall not face any street.

²⁴ This is a ½ mile

²⁵ This is a ¼ mile

²⁶ This is a 1/8 mile

4. Service trucks for the purpose of loading and unloading materials and equipment or removing wastes shall be restricted to the hours between 8:00 AM and 8:00 PM.
5. Accessory outdoor storage shall be allowed in the rear of the subject property if screened appropriately per Chapter ***.
6. Any Industrial and Manufacturing, Light use over 5,000 square feet of building area shall require conditional use approval.

4.03.24 Kennel.

- A. A two hundred fifty (250) foot separation shall be maintained between the area and structures where animals are housed and any property line.
- B. Outside runs for commercial kennels shall be operated only with an attendant present on the premises twenty four (24) hours a day.
- C. At a minimum, the animals shall be enclosed within a six foot (6') fence or wall to restrain animals from running at large.
- D. Visual screening shall be required to buffer adjacent land uses.
- E. No more than twenty five percent (25%) of the building floor area may be used for related accessory retail sales.
- F. No more than twenty five percent (25%) of the building floor area may be used for related accessory grooming uses.

4.03.25 Manufactured Home²⁷.

- A. Manufactured home design standards/building requirements.
 1. The manufactured home must be partially or entirely manufactured in a factory.
 2. The manufactured home must be not less than twenty-four (24) feet in width and thirty-six (36) feet in length.
 3. The manufactured home must be set on an excavated, backfilled, engineered foundation enclosed at the perimeter so that the top of the perimeter wall sits no more than twelve (12) inches above finish grade. The foundation shall be similar in appearance and durability to a masonry foundation of a site-built dwelling. The foundation shall provide an anchoring system for the manufactured home that is totally concealed under the structure.
 4. The manufactured home must have brick, wood or cosmetically equivalent exterior siding on all exterior walls, which provides a consistent, continuous facade from the bottom of the soffit (top of the wall section) downward to the top of the exposed perimeter foundation. The exterior siding of the manufactured home must have the same appearance as materials commonly used on residential dwellings. Metal siding must be painted or anodized.

²⁷ Carried forward the existing regulations.

5. The manufactured home must have a pitched roof with a pitch of at least a nominal three (3) in twelve (12). The roof must be covered with shingles, shakes or tile. Eaves of the roof must extend at least one (1) foot from the intersection of the roof and the exterior walls.
 6. The manufactured home must have windows that are wood, vinyl-coated or anodized aluminum.
 7. The manufactured home must have color-coordinated body and trim. Colors of both the factory components and the site-built components shall be the same.
 8. The main entrance to the manufactured home must face or be oriented toward an adjacent street.
 9. The transportation mechanisms, including the wheels, axles and hitch, must be removed.
 10. No manufactured home shall be occupied for dwelling purposes unless it is properly placed in a manufactured home space and connected to water, sewerage, electric and gas utilities, as appropriate.
 11. All manufactured homes shall be certified pursuant to the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. § 5401 et seq., or shall be certified by the Colorado Division of Housing pursuant to Section 24-32-701 et seq., C.R.S.
 12. All manufactured homes shall have an enclosed crawlspace underneath the manufactured home and shall not provide a harborage for rodents or create a fire hazard. No enclosed crawlspace shall be used for storage unless the storage area is surfaced with concrete. Adequate access and ventilation shall be provided in accordance with the Guidelines For Manufactured Housing Installation.
 13. All manufactured homes shall meet or exceed equivalent engineering standards for other single-family residences.
 14. Additions to increase the floor area of manufactured home shall not be permitted except for patios, porches, garages, decks or carports. Garages may be detached or attached.
 15. Prior to occupancy, the Building Inspector shall inspect each manufactured home to determine compliance with this Code. No occupancy shall be permitted or certificate of occupancy issued until that inspection and all connections to public utilities have been made. The owner or home builder shall pay to the Town a building permit fee for each residential structure as may be required by this Code. Installation procedures and the building permit fee shall be in accordance with the then current Guidelines for Manufactured Housing Installation, including appendices, published by the International Conference of Building Officials for manufactured homes and as adopted by the Town.
 16. All additions shall comply with minimum yard requirements, and a building permit shall be required in advance for any such addition. (Ord. 11-2007 §1)
- B. Density, dimensional and spacing standards.
1. The minimum area manufactured home space shall be four thousand (4,000) square feet.

2. The minimum lot length shall be eighty (80) feet.
3. The minimum lot width shall be fifty (50) feet.
4. The maximum building height shall be thirty-five (35) feet.
5. The maximum gross density shall be ten (10) units per acre.
6. The distance between any building or manufactured home from a property line of the manufactured home park shall be twenty (20) feet.
7. The front setback of a manufactured home shall be at least fifteen (15) feet from the back of the curb; provided, however, that in order to encourage the enclosed storage of parked vehicles, the setback from the back of the curb to a garage shall be either five (5) feet or fifteen (15) feet or greater.
8. Side spacing shall provide for a minimum distance of twenty (20) feet between manufactured homes.
9. Rear spacing shall provide for a minimum distance of twenty (20) feet between units when units are side-to-end and a minimum distance of ten (10) feet between units when units are end-to-end.
10. There shall be a minimum setback of twenty (20) feet between any service facility or manufactured home park permanent building and any manufactured home.
11. Accessory buildings and structures shall be constructed in accordance with the adopted Building Code. Accessory buildings and structures shall include steps, attached or detached patios that are open on three (3) sides, attached or detached decks that are open on three (3) sides, attached or detached storage units, attached or detached garages and attached or detached carports. Accessory buildings or structures may be located adjacent to a manufactured home space line; provided, however, that a minimum of six (6) feet of separation is provided between a garage and any other structure on an adjoining space. Any other building or structure shall provide a minimum of ten (10) feet between it and any structure on an adjoining space.
12. The limits of each manufactured home lot shall be clearly marked on the ground by permanent monuments set pursuant to Section 38-51-101, C.R.S. (Ord. 11-2007 §1)

C. Parking.

1. Every manufactured home space shall have two (2) off-street parking spaces adjacent to the manufactured home. There shall be one (1) additional parking space for each manufactured home space within one hundred (100) feet for use by occupants and guests.
2. Off-street vehicle parking for recreation facilities. Off-street vehicle parking shall be provided for recreation facilities located within a manufactured home park. One (1) space per two hundred fifty (250) square feet of gross floor area, plus one (1) space per employee at the maximum shift, shall be provided for enclosed recreation facilities. Twenty (20) spaces are to be provided for every

diamond or athletic field, or one (1) space for every four (4) spectator seats, whichever is greater. (One [1] seat is equal to two [2] feet of bench seating length.) Handicapped parking spaces shall be provided in conformance with the Americans With Disabilities Act, as may be amended from time to time. (Ord. 11-2007 §1)

D. Outdoor Living Area.

1. No less than eight percent (8%) of the gross site area shall be reserved for and devoted to improved recreation areas and facilities provided in locations convenient to all manufactured home spaces.
2. An outdoor living area shall be provided on each space equal to at least ten percent (10%) of its area, provided that in no case shall such area be less than three hundred (300) square feet or required to be more than five hundred (500) square feet. The minimum horizontal dimension of such area shall be not less than fifteen (15) feet.
3. Such outdoor living area shall be properly drained, located for convenience and optimum use and walled, fenced or landscaped to provide reasonable privacy. (Ord. 11-2007 §1)

E. Tenant Storage.

1. A separate uniform tenant storage structure shall be provided for each space, located on each space.
2. There shall be a minimum of two hundred twenty-four (224) cubic feet of storage area provided for each manufactured home space.
3. Design and location of tenant storage shall enhance the appearance of the park, and the exterior siding of the structure shall have the same appearance as materials commonly used on residential dwellings. (Ord. 11-2007 §1)

4.03.26 Medical Office²⁸.

A. C-2 Zone.

1. No Medical Office shall be located within five hundred (500) feet of any other Medical Office.
2. Any Medical Office over 2,500 square feet of building area shall require conditional use approval.

4.03.27 Mini-Storage Facility.

- A. The Mini-Storage Facility shall be secured so that access is limited to tenants (or owners) and fire, police, or emergency service officials.
- B. Mini-Storage Facilities shall provide adequate drive aisles between all buildings for vehicle circulation and fire and emergency access.
- C. No Mini-Storage unit shall be used for the storage of explosives, ammunition, hazardous, or flammable materials.

²⁸ Provided a distance requirement from other medical uses to prevent from medical office monopolies in downtown.

- D. All buildings in the self-storage warehouse facility shall be architecturally compatible with the surrounding development in terms of architectural style and building materials and color.
- E. Mini-Storage units shall be used solely for the purpose of storage of goods and possessions and shall not be used for operation of a business, hobby, band rehearsal, or any type of activity not related to the storage of personal property of the owner or tenant of the unit.
- F. The Mini-Storage Facility may include an accessory on-site office.
- G. No office shall exceed more than three thousand (1,500) square feet.
- H. No outdoor storage is permitted in the C-3 zone.
- I. Outdoor storage may be allowed within LI and I zones in approved on-site areas for vehicles and recreational equipment if they are covered by an awning or canopy structure.
- J. Hours of public access to a Mini-Storage Facility shall be restricted to 6:00 AM. to 10:00 PM.

4.03.28 Mixed-Use Dwelling²⁹.

- A. A single-story Mixed-Use Dwelling unit shall be permitted if the following standards are met.
 - 1. The nonresidential use shall front the street.
 - 2. The residential use shall be located behind the nonresidential use.
 - 3. The residential use shall not exceed 50%³⁰ of the total Mixed-Use Dwelling.
 - 4. No single-story Mixed-Use Dwelling shall exceed three thousand (3,000) square feet.
- B. A multiple story Mixed-Use Dwelling shall be permitted if the following standards are met.
 - 1. The first floor shall be used for nonresidential uses.
 - 2. No residential uses are allowed on the first floor.
 - 3. All residential parking shall be provided in the rear of the site.

4.03.29 Motor Vehicle Dealership³¹.

- A. A Motor Vehicle Dealership shall be located five hundred (500) feet from any residential district or use.
- B. No Motor Vehicle Dealership shall be located within five hundred (500) feet of any other Motor Vehicle Dealership.
- C. No more than fifty percent (50%) of the total building floor area may be used for related accessory uses such as retail sales, vehicle repair and service, and vehicle washing.
- D. Vehicle inventory spaces shall not count towards the minimum parking requirements.

4.03.30 Motor Vehicle Repair, Heavy³².

²⁹ Implement current standards via the existing definition. How far do we want to go with the standards here?

³⁰ Example (2,000 sf single story Mixed-Use Dwelling): Max residential area – 1,000 sf and Max nonresidential area – 1,000 sf

³¹ Add a requirement about gas and repairs as accessory uses. Needs distancing, screening, and noise requirements.

³² Provided distancing, screening, enclosure, and noise requirements.

- A. All Motor Vehicle Repair, Heavy repair activities shall take place within an enclosed space.
- B. Motor Vehicle Repair, Heavy facilities shall be located five hundred (500) feet from any residential use, religious land use or school.
- C. Motor Vehicle Repair, Heavy facilities shall set back at least fifty (50) feet from the front property line and twenty-five (25) feet from the rear property line.
- D. Disabled or damaged vehicles are not allowed to remain in an exterior location unless screened from public view.
- E. Screened areas for disabled or damaged vehicles are only allowed in areas to the rear or side of the principal structure of the Motor Vehicle Repair, Heavy facility.
- F. Screening for disabled or damaged vehicles shall be constructed from concrete or masonry and be at least six (6) feet tall.

4.03.31 Motor Vehicle Repair, Light³³.

- A. All Motor Vehicle Repair, Light repair activities shall take place within an enclosed space.
- B. Motor Vehicle Repair, Light facilities shall be located two hundred fifty (250) feet from any residential use, religious land use or school.
- C. Disabled or damaged vehicles are not allowed to remain in an exterior location unless screened from public view.
- D. Screened areas for disabled or damaged vehicles are only allowed in areas to the rear of the principal structure of the Motor Vehicle Repair, Light facility.
- E. Screening for disabled or damaged vehicles shall be constructed from concrete or masonry and be at least six (6) feet tall.

4.03.32 Multi-Family Dwelling³⁴.

- A. A Multi-Family Dwelling shall not exceed twelve (12) units.
- B. All Multi-Family Dwelling sites shall provide at least 20% of functional open space.

4.03.33 Nightclub³⁵.

- A. No Nightclub shall be located within five hundred (500) feet of any residential district or use.
- B. No Nightclub shall be located within two hundred fifty (250) feet of any school or religious land use.
- C. Service trucks for the purpose of loading and unloading materials and equipment or removing wastes shall be restricted to the hours between 8:00 AM and 8:00 PM.

³³ Provided distancing, screening, enclosure, and noise requirements.

³⁴ Maybe add specific standards for apartments in the downtown area? Why would this be a conditional use? Are they concerned about size, height, etc.?

³⁵ Can this use be collapsed into the bar category?

4.03.34 Off-Street Parking Facility³⁶.

- A. Off-Street Parking Facilities shall meet the following requirements established in Table 4.03.33-1.

Table 4.03.33-1 Off-Street Parking Facilities	
Zone	Maximum Parking Square Footage Area
C-1	20,000
C-2	15,000
C-3	30,000

- B. An Off-Street Parking Facility may exceed the limits established if a parking garage is provided; however, no parking floor shall exceed the square footage limits.
- C. Parking garages shall follow the zone height requirements.
- D. Exterior parking garage elevations shall be compatible with the architecture found in the zone in terms of style, material, and other exterior elements.
- E. Parking garages shall include a minimum of two of the following elements on any facade facing a public street or space:
1. Window and door openings comprising a minimum of twenty-five (25) percent of the ground floor facade;
 2. Awnings;
 3. Sill details; or
 4. Columns.

4.03.35 Pawn Shop.

- A. All Zones.
1. A Pawn Shop shall be located five hundred (500) feet from any residential district or use.
 2. No Pawn Shop shall be located within two hundred fifty (250) feet of any school or religious land use.
 3. No Pawn Shop shall be located within one thousand (1,000) feet of any other Pawn Shop.
- B. C-1 and C-2 Zones.
1. No Pawn Shop shall exceed two thousand (2,000) square feet in building area.
 2. No outdoor display is permitted.

4.03.36 Recreational Entertainment, Outdoor³⁷.

- A. Any Recreational Entertainment, Outdoor use shall be located five hundred (500) feet from any residential district or use.

³⁶ Maybe implement a size and parking space requirement to prevent large parking lots in prime areas?

³⁷ Should we add standards for this use (think about ball fields, stadiums, etc.)?

- B. Any Recreational Entertainment, Outdoor use shall close by 10:00 PM.
- C. All exterior lighting for the purposes of illuminating the Recreational Entertainment, Outdoor use or any accessory use shall terminate at 10:00 PM. Lighting for walls, security measures, sconces, and parking facilities are excluded from this requirement.
- D. Noise generated by the use shall not exceed 45 dBA at any residential property line between the hours of 10:00 PM and 8:00 AM.

4.03.37 Religious Land Use³⁸.

- A.
- B.

4.03.38 Research and Development.

- A. All Zones.
 - 1. Research and Development facilities shall not contain or utilize toxic or explosive materials.
 - 2. All facilities shall be completely enclosed.
- B. C-3 Zone.
 - 1. Any Research and Development facility shall be located two hundred fifty (250) feet from any residential district or use.
 - 2. No Research and Development facility shall be located within five hundred (500) feet of any other Research and Development facility.
 - 3. Any Research and Development facility over 5,000 square feet of building area shall require conditional use approval.
- C. LI Zone.
 - 1. Any Research and Development facility shall be located five hundred (500) feet from any residential district or use.
 - 2. Any Research and Development facility over 10,000 square feet of building area shall require conditional use approval.

4.03.39 Resource Extraction³⁹.

- A.
- B.

³⁸ If consultants provide standards, they must comply with RLUIPA. RLUIPA prohibits zoning and landmarking laws that:

- (1) treat churches or other religious assemblies or institutions on less than equal terms with nonreligious assemblies or institutions;
- (2) discriminate against any assemblies or institutions on the basis of religion or religious denomination;
- (3) totally exclude religious assemblies from a jurisdiction; or
- (4) unreasonably limit religious assemblies, institutions, or structures within a jurisdiction.

³⁹ Loveland and Durango handle resource extraction through an Extraction Master Plan that is adopted by the jurisdiction. Would Wellington consider this approach?

4.03.40 Restaurant, Fast Food⁴⁰.

- A. Any Restaurant, Fast Food shall be located two hundred fifty (250) feet from any residential district or use.
- B. No Restaurant, Fast Food shall have a drive-thru window.
- C. Any Restaurant, Fast Food shall have a trash management program for the daily removal of on-site trash and litter.
- D. Loading is prohibited between the hours of 10:00 PM and 8:00 AM.

4.03.41 Restaurant, Fast Food with Drive-Thru.

- A. No Restaurant, Fast Food with Drive-Thru shall exceed five thousand (5,000) square feet in building area.
- B. Any Restaurant, Fast Food with Drive-Thru shall be located two hundred fifty (250) feet from any residential district or use.
- C. All drive-thru interactions shall occur within three (3) feet of a designated “drive-thru lane”.
- D. A drive-thru lane shall be at least ten (10) feet wide.
- E. A drive-thru lane shall originate at the last stacking space from the “point of order”.
- F. A drive-thru lane shall provide at least three (3) vehicle stacking spaces before the “point of order”.
- G. Vehicle stacking spaces shall be ten (10) feet wide by twenty (20) feet long.
- H. Any Restaurant, Fast Food with Drive-Thru shall designate a “point of order” on site where meal orders are communicated by patrons to staff.
- I. A “point of order” may be established before or at the drive-thru window.
- J. If a “point of order” is established before the drive-thru window, it shall be located at least thirty (30) feet from the first, or only, drive-thru window.
- K. Two (2) drive-thru windows may be allowed on site.
- L. If multiple drive-thrus are proposed, they shall be spaced at least forty (40) feet from one another.
- M. No drive-thru lane shall be closer than five (5) feet from an adjacent property line.
- N. Any Restaurant, Fast Food with Drive-Thru shall have a trash management program for the daily removal of on-site trash and litter.
- O. Loading is prohibited between the hours of 10:00 PM and 8:00 AM.

4.03.42 Restaurant, Sit Down.

- A. No Restaurant, Sit Down shall have a drive-thru window.
- B. Accessory outdoor customer seating/dining areas are permitted if they meet the applicable district’s dimensional standards.

⁴⁰ Why not have one Restaurant use with the specific standards applying to differentiate?

- C. Any Restaurant, Sit Down shall have a trash management program for the daily removal of on-site trash and litter.
- D. Loading is prohibited between the hours of 10:00 PM and 8:00 AM.

4.03.43 Retail and Medical Marijuana Stores.

- A. All retail and medical marijuana stores shall comply with the regulations established in Ordinance No. ***-2021⁴¹ as approved by the Town of Wellington voters to regulate marijuana within town limits.
- B. After January 1, 2023, the Town may make changes to regulations related to Retail and Medical Marijuana Stores.

4.03.44 Retail Store⁴².

- A. C-1
 - 1. No Retail Store shall exceed ten thousand (10,000) square feet in building area.
 - 2. No outdoor storage or display is permitted.
- B. C-2
 - 1. No Retail Store shall exceed five thousand (5,000) square feet in building area.
 - 2. No outdoor storage or display is permitted.
- C. C-3
 - 1. A Retail Store shall meet the following requirements established in Table 4.03.43-1.

Table 4.03.43-1 Retail Store	
Property Size	Maximum Building Square Foot Percentage
≤ 1 acre	20% ⁴³
1.01 to 10 acres	25% ⁴⁴
> 10 acres	30% ⁴⁵

- 2. Outdoor storage or display shall be limited to 15% of the total building area.
- 3. Any outdoor storage or display shall be screened.
- 4. Screening shall be constructed from concrete or masonry and be at least six (6) feet tall.
- 5. Screening for storage may be constructed from concrete, masonry, or an approved alternative by the Director.

4.03.45 Salvage Yard.

⁴¹ Added language in the use regulations that links the newly adopted marijuana ordinance. We will provide a hyperlink that will take the reader to the approved marijuana ordinance.

⁴² They want specific regulations for large retail stores. Why not combine grocery stores and retail stores since groceries are a form of retail and offer similar traffic?

⁴³ Sample calculation based on a 1 acre lot (acreage x percentage = max building square footage). $43,560 \times 0.2 = 8,712 \text{ sf}$

⁴⁴ Sample calculation based on a 10 acre lot (acreage x percentage = max building square footage). $435,600 \times 0.25 = 108,900 \text{ sf}$

⁴⁵ Sample calculation based on a 15 acre lot (acreage x percentage = max building square footage). $653,400 \times 0.3 = 196,020 \text{ sf}$

A. Measurements and Setbacks.

1. Any Salvage Yard shall be located one thousand (1,000) feet from any residential use or district.
2. No Salvage Yard shall be located within one thousand three hundred twenty (1,320)⁴⁶ feet from any other Salvage Yard.
3. Any Salvage Yard shall set back at least fifty (50) feet from the front property line and twenty-five (25) feet from the rear property line.
4. Any Salvage Yard shall be at least a minimum property size of five (5) acres.

B. Operation.

1. No hazardous wastes or hazardous materials shall be accepted or deposited at any salvage yard, except as incidental to the salvage operation.
2. Salvage operations shall be conducted to remove hazardous wastes and materials and dispose of them according to state and federal requirements.
3. Service trucks for the purpose of loading and unloading materials and equipment or removing wastes shall be restricted to the hours between 8:00 AM and 8:00 PM.

C. Screening.

1. Screening shall be provided for all disabled or damaged vehicles, tools, and equipment.
2. Screening for disabled or damaged vehicles, tools, and equipment shall be constructed from concrete or masonry and be at least six (6) feet tall.
3. No screening wall shall exceed twelve (12) feet tall.
4. In no instance shall any disabled or damaged vehicles, tools, or equipment be stacked higher than the required concrete or masonry screening wall.

4.03.46 Service Station⁴⁷.

- A. Service Stations shall not be located within one hundred (100) feet of any residential use or district.
- B. Any pump island or other structure shall not be less than twenty (20) feet from adjacent property lines or street and highway right-of-way lines.
- C. Overhead canopies or weather protection structures shall not be less than ten (10) feet from any right-of-way line or property line.
- D. In the C-1 zone, the total fuel pumps shall not exceed four (4).

4.03.47 Single-Family Attached Dwelling⁴⁸.

- A. No Single-Family Attached Dwelling shall exceed six (6) units.

⁴⁶ This is a ¼ mile

⁴⁷ Combine with convenience store with fuel sales?

⁴⁸ Need a limit on amount of attached units in one row (4, 5, 6, etc.). Design requirements where they need to be rear or side entry.

- B. All Single-Family Attached Dwellings shall provide rear entry parking garages where alley access exists.

4.03.48 Solid Waste Facility⁴⁹.

- A. Any Solid Waste Facility shall comply with all applicable Larimer County, State of Colorado, and Federal regulations and permit requirements prior to approval.
- B. Any Solid Waste Facility shall be:
 - 1. Located one thousand (1,000) feet from any residential use or district.
 - 2. At least a minimum property size of ten (10) acres.

4.03.49 Stable.

- A. In addition to the regulations prescribed in B – F below, a Stable shall comply with the regulations established in Chapter 7 – Health, Sanitation, and Animals, Article 4 – Animals of the Wellington Municipal Code.
- B. A Stable is only allowed on a lot that has at least one (1) acre of land.
- C. A person shall keep only the number of horses permitted for the lot area as described in Table 4.03.48-1.

Table 4.03.48-1 Stable Standards	
Property Size	Number of Horses
1 to 2 acres	2
2.01 to 5 acres	4
5.01 to 10 acres	8
> 10 acres	8 + 1 for each 0.5 acre after 10 acres

- D. A Stable shall include a pen, corral, fence, or similar enclosure containing at least eight hundred (800) square feet of land for each animal with a stable under a roof containing at least one hundred (100) square feet for each animal.
- E. A Stable must have proper drainage so as not to create offensive odors, fly breeding, or other nuisances.
- F. A pen, corral, fence, or similar enclosure shall be at least four (4) feet tall and shall maintain a strength to retain the horse(s).

4.03.50 Technical School⁵⁰.

- A. C-2 Zone.
 - 1. No Technical School shall exceed three thousand (3,000) square feet in building area.

⁴⁹ Basic distancing requirements.

⁵⁰ Why a CUP in C2? What would be the concerns of allowing it there be?

2. No Technical School shall be located within two hundred fifty feet of any other Technical School.
3. Any Technical School exceeding 3,000 square feet shall require a Conditional Use Permit.

4.03.51 Veterinary Facilities, Large Animals⁵¹.

- A. Any Veterinary Facilities, Large Animals shall be located on a property of at least one (1) acre.
- B. Any Veterinary Facilities, Large Animals shall be designed and constructed to:
 1. Eliminate any emission of odor offensive to persons owning, occupying, or patronizing properties adjacent to the subject property.
 2. Reduce the sound coming from any Veterinary Facilities, Large Animals to the level of sixty-five (65) decibels at any given abutting property line.
- C. Exterior areas used to exercise, walk, or keep animals shall set back at least one hundred (100) feet from any lot line.
- D. All exterior exercise areas and runs shall be fenced.
- E. Animals are prohibited from being outdoors between 8:00 PM and 8:00 AM.
- F. Animals shall only be walked or exercised in on-site outdoor areas.
- G. No animal boarding is allowed for any length of time except if boarding is necessary to provide surgical or other medical care to the animals.
- H. All buildings and accessory structures shall set back at least two hundred fifty (250) feet from any residential property line.
- I. All litter and animal waste shall be contained and controlled on the subject property.

4.03.52 Veterinary Facilities, Small Animals.

- A. Any Veterinary Facilities, Small Animals, including all treatment rooms, cages, pens, kennels, and exercise runs, shall be maintained within a completely enclosed, soundproof building.
- B. Any Veterinary Facilities, Small Animals shall be designed and constructed to:
 1. Eliminate any emission of odor offensive to persons owning, occupying, or patronizing properties adjacent to the subject property.
 2. Reduce the sound coming from any Veterinary Facilities, Small Animals to the level of sixty-five (65) decibels at any given abutting property line.
- C. No animal boarding is allowed for any length of time except if boarding is necessary to provide surgical or other medical care to the animals.

4.03.53 Wholesale Distribution, Warehousing, and Storage.

- A. LI Zone.
 1. Any Wholesale Distribution, Warehousing, and Storage use shall be located two hundred fifty (250) feet from any residential use or district.

⁵¹ Why not one vet category with specific regs applying to large and small? Make vets allowable but differentiate large animals in certain zones.

2. No Wholesale Distribution, Warehousing, and Storage use shall exceed 15,000 square feet.

4.03.54 Workshop⁵².

B. All Zones.

1. All permitted repair work, vehicle washing, lubrication, and installation of parts and accessories shall be performed within an enclosed structure.
2. Any Workshop shall be located five hundred (500) feet from any residential use or district.
3. All dismantled vehicles, parts, and repair supplies shall be stored within an enclosed building or totally screened from view by a solid fence or wall. All vehicles awaiting repair or service shall be stored on-site in approved parking spaces and not on a public right-of-way.

C. C-1 and C-2 Zones.

1. No Workshop shall exceed two thousand (2,000) square feet in building area.
2. Any Workshop exceeding two thousand (2,000) square feet shall require a Conditional Use Permit.

4.03.55 Wireless Telecommunications Facility⁵³.

A.

B.

4.04 Accessory Uses and Structures

4.04.1 Purpose. This section authorizes the establishment of accessory uses and buildings that are incidental and customarily subordinate to principal uses. An accessory use is “incidental and customarily subordinate” to a principal use if it complies with the standards established in this section. All principal uses allowed in a zoning district shall be deemed to include those accessory uses, buildings, and activities typically associated with the use, unless specifically prohibited in this section.

4.04.2 Approval Procedure.

- A. Any of the accessory uses identified in this section may be allowed as accessory to an authorized principal use provided that:
 1. The proposed accessory use is allowed as a principal or accessory use in the base district where proposed; and
 2. The proposed accessory use or building is consistent with the general and specific standards for accessory uses in this subsection.

⁵² Create standards that mitigate adverse impacts in lighter intensity areas (i.e., noise, enclosure, setbacks)

⁵³ Regulations to be proposed as we continue to receive more information from staff and stakeholders.

- B. Simultaneously with a Principal Use. Accessory uses or buildings may be reviewed as part of review of an associated principal use. In cases where the principal use is subject to a Conditional Use Permit, an accessory use may only be authorized in accordance with an approved Conditional Use Permit.
- C. Subsequent to a Principal Use.
 - 1. Unless exempted, a building permit shall be required in cases where an accessory use or building is proposed subsequent to a principal use.
 - 2. In cases where the principal use is subject to a Conditional Use Permit, an accessory use may only be authorized in accordance with the provisions in **Chapter 2, Conditional Use Permits**.

4.04.3 Interpretation of Unidentified Accessory Uses. The Planning Director shall evaluate applications for accessory uses that are not identified in this section on a case-by-case basis, based on the following standards:

- A. The definition of "accessory use" in **Chapter 9, Definitions**, and the general accessory use standards and limitations established in Chapter 4.04;
- B. The purpose and intent of the base districts in which the accessory use is located;
- C. Potential adverse effects the accessory use or building may have on other lots, compared with other accessory uses permitted in the district; and
- D. The compatibility of the accessory use with other principal and accessory uses permitted in the district.

4.04.4 General Standards for all Accessory Uses. All accessory uses and buildings shall be subject to the general standards in this section, as well as any applicable supplemental standards in Chapter 4.04.5 and all standards applicable to the associated principal use as set forth in **Chapter 4 Use Standards**.

- A. Size. All accessory uses shall:
 - 1. Be clearly subordinate in area, extent, and purpose to the principal use or structure; and
 - 2. Not violate the bulk, density, parking, landscaping, or open space standards of this Land Use Code when taken together with the principal use or structure.
 - 3. The floor area of any detached accessory building shall not exceed 50 percent of the floor area of the principal structure. The total combined floor area of all buildings shall not exceed the maximum lot coverage for the zoning district in which it is located. The Planning Director may authorize a building to exceed this percentage if the building is used as a guest house, or is used for animal production or crop production associated with an agricultural use.
- B. Function. All accessory uses shall directly serve the principal use or building, and be accessory and clearly incidental to the principal use or building.
- C. Timing. Accessory uses shall not be constructed or established prior to the start of construction of the principal use or building. An accessory building shall not be used until the construction of the primary building is complete.

- D. Height. Accessory buildings shall be limited to a maximum height of 24 feet unless exempted from the height requirements in this Code.
- E. Location.
 - 1. Accessory uses or buildings shall be located on the same lot as the principal use or building.
 - 2. Accessory buildings shall not be located within platted or recorded easements.
 - 3. The Planning Director may authorize an accessory building on a vacant lot if the structure is used for animal production or crop production associated with an agricultural use, or used in conjunction with a park or community garden.
- F. Design Compatibility.
 - 1. Except where exempted, all accessory buildings shall be designed to be aesthetically compatible with the principal building. Compatibility shall be measured in terms of building materials, building orientation, building placement, and building mass. Non-enclosed stables, gazebos, greenhouses, and carports ten feet or less in height with a roofed area of 300 square feet or less are exempted from this compatibility requirement.
 - 2. Applicants for accessory buildings not exempted in accordance with this subsection who request exceptions from the design compatibility requirements shall demonstrate screening methods or design features that will be used to minimize any potential adverse effects on neighboring properties.
- G. Ownership. Accessory uses or buildings shall be owned or operated by the same person as the principal use or buildings.

4.04.5 Supplemental Accessory Use Standards.

- A. Accessory Dwelling Unit⁵⁴.
 - 1. A Detached Accessory Dwelling Unit shall only be located in the rear of a lot.
 - 2. A Detached Accessory Dwelling Unit must comply with the required setbacks by the zoning district in which the unit is located. If the accessory dwelling unit is part of the primary dwelling (attached), it must comply with principal building setbacks for the zoning district in which the unit is located.
 - 3. An Accessory Dwelling Unit must comply with the zoning district's height requirements. An Accessory Dwelling Unit must not exceed the height of the primary dwelling.
 - 4. An Accessory Dwelling Unit must not exceed one thousand (1,000) gross square feet in area.
 - 5. An Accessory Dwelling Unit must connect utilities to those of the primary dwelling.
 - 6. An Accessory Dwelling Unit must maintain the architectural design, style, appearance, and character of the primary dwelling.

⁵⁴ Two types of ADUs – detached and attached.
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7. The property owner must occupy the principal dwelling as the owner's permanent residence. For purposes of these regulations, "property owner" means the title holder and/ or contract purchaser of the lot, and "owner occupancy" means that a property owner makes their permanent residence at the site.
- B. Drive-Thru Facility⁵⁵. A Drive Through Facility may be permitted as an accessory use subject to the following standards.
1. Setbacks. All Drive-Thru Facilities are set back five feet (5 ft) from any property line.
 2. Stacking.
 - a. All Drive-Thru Facilities accommodate the required stacking standards.
 - b. A drive-thru/ATM lane is provided on site.
 - c. The drive-thru/ATM lane is at least ten (10) feet wide.
 - d. The drive-thru/ATM lane provides at least three (3) vehicle stacking spaces before the drive-thru window/ATM.
 - e. Vehicle stacking spaces shall be ten (10) feet wide by twenty (20) feet long.
- C. Office.
1. An accessory office shall be allowed for an approved use.
 2. The office shall not occupy more than twenty five percent (25%) of the gross floor area of the approved use.
 3. If the approved primary use is not located in a structure, the office structure shall not occupy more than five percent (5%) of the property area on which the primary use is located or five thousand (5,000) square feet, whichever is less.
- D. Outdoor Storage.
1. Outdoor storage areas shall be screened according to **Chapter 5, Development Standards**.
 2. All outdoor storage areas shall be completely fenced and screened from public view.
 3. Screening shall be at least six feet (6') tall, but no more than ten feet (10') tall unless where specifically stated otherwise.
 4. One side of the outdoor storage may be left unenclosed, provided that the materials stored in the area shall not be visible from a public roadway or an abutting property.
 5. Cyclone or chainlink fencing (with or without slats) shall not be deemed a screening material.
 6. Materials shall not be stored within the required setbacks.
 7. Stored items shall not block sidewalks or parking areas and may not impede vehicular or pedestrian traffic.
 8. Outdoor storage for commercial or industrial uses shall be limited to those items owned or used by the business.

⁵⁵ This includes a stand alone ATM

9. Outdoor storage for a multi-family development, recreational vehicle park, or manufactured home park, shall be only for recreational vehicles or personal recreation items of the tenants.

4.05 Temporary Uses and Structures

4.05.1 Purpose. This section allows for the establishment of certain temporary uses of limited duration and special events, provided that such uses comply with the standards in this subsection and are discontinued upon the expiration of a set time period. Temporary uses and special events shall not involve the construction or alteration of any permanent building.

4.05.2 Approval Procedure. Any use listed in this section may be permitted as a temporary use provided:

- A. Where indicated in Table 4.02-1 Use Table; and
- B. The proposed temporary use is consistent with the general and specific standards for temporary uses and structures in this section.

4.05.3 General Standards for all Temporary Uses. All temporary uses or structures shall meet the following general requirements, unless otherwise specified in this Land Use Code:

- A. The temporary use or structure shall not be detrimental to property or improvements in the surrounding area, or to the public health, safety, or general welfare.
- B. The temporary use shall comply with all applicable general and specific regulations of this Chapter 4.05, unless otherwise expressly stated.
- C. Permanent alterations to the site are prohibited.
- D. All temporary signs associated with the temporary use or structure shall be properly permitted and removed when the activity ends or permit expires, whichever occurs first.
- E. The temporary use or structure shall not violate any applicable conditions of approval that apply to a principal use on the site.
- F. The temporary use regulations of this section do not exempt the applicant or operator from any other required permits, such as health or building permits.
- G. If the property is undeveloped, it shall contain sufficient land area to allow the temporary use or structure to occur, as well as any parking and traffic circulation as required that may be associated with the temporary use, without disturbing sensitive or protected resources, including required buffers, 100-year floodplains, river protection setbacks, and required landscaping. At the conclusion of the temporary use or at expiration of the permit, whichever occurs first, all disturbed areas of the site shall be restored or improved to the condition that existed prior to the use.
- H. If the property is developed, the temporary use shall be located in an area that is not actively used by an existing approved principal use, and that would support the proposed temporary use without encroaching or creating a negative impact on existing buffers, open space, landscaping, traffic movements, pedestrian circulation, or parking space availability.

- I. Tents and other temporary structures shall be located so as not to interfere with the normal operations of any permanent use located on the property, shall be anchored, and meet the requirements of the Building Official or Fire Marshal, including fire rating.
- J. Off-street parking shall be adequate to accommodate the proposed temporary use.

4.05.4 Supplemental Temporary Use Standards⁵⁶.

- A.
- B.

DRAFT

⁵⁶ Any supplemental temporary use standards that need to be considered? I.e., carnivals, flea markets, holiday festivals, etc.
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CHAPTER 5: DEVELOPMENT STANDARDS¹

5.01 Purpose and Organization

5.01.1 Purpose. This chapter establishes uniform standards for the development and improvement of property throughout the Town of Wellington to ensure quality development that is consistent with the Town's Comprehensive Plan.

5.01.2 Organization. This chapter is organized into eleven (11) subsequent sections for each development standard. This chapter regulates:

- Exterior Lighting (5.02);
- Fences (5.03);
- Landscaping and Screening (5.04);
- Off-Street Parking (5.05);
- Parks and Open Space (5.06);
- Refuse/Trash Disposal (5.07);
- Signs (5.08);
- Site and Building Design (5.09);
- Stormwater and Sewer (5.10);
- Transportation and Connectivity (5.11); and
- Water (5.12)

5.01.3 Applicability

- A. All development applications and building permit applications shall comply with the standards contained in this Chapter.
- B. The Planning Commission, Board of Trustees and Town Staff, as appropriate, will evaluate each proposal based on these standards set forth in this Chapter and the context within which a project is located. The standards are intended to be specific enough to guide development, but not to preclude creative design solutions. Applicants must substantially conform to the

¹ Cross-reference language when mentioning zoning districts or other areas within the code.

design standards unless it can be demonstrated that an acceptable alternative meets one (1) or more of the following conditions:

1. The alternative better achieves the stated intent;
2. The effect of other standards will be improved by not applying a specific standard; and/or
3. Strict application or unique site features make the standard impractical.

5.02 Exterior Lighting

5.02.1 Purpose. The purposes of this Section are to:

- A. Allow the use of exterior lighting that does not exceed the levels specified in International Engineering Society (IES) recommended practices for night-time safety, utility, security, productivity, enjoyment, and commerce.
- B. Minimize adverse off-site impacts of lighting such as light trespass and obtrusive light.
- C. Limit light pollution and reduce skyglow.
- D. Help protect the natural environment from the adverse effects of night lighting from gas and oil extraction activities or electric services.
- E. Conserve energy and resources to the greatest extent possible.
- F. Encourage exterior lighting that is functional, aesthetically pleasing, and complimentary to the architectural style of buildings or setting.

5.02.2 Applicability.

- A. Generally. This Section applies to all exterior lighting within the Town. All exterior lighting installed after the effective date of this Land Use Code shall comply with this Section.
- B. Exemptions².
 1. Because of their limited hours of operation and their unique requirements for nighttime visibility, playing fields, tennis courts, and similar outdoor recreational uses (both public and private, unless otherwise restricted by the Town) are exempt from the general provisions of this section. However, exterior lighting for those uses is terminated within an hour of the activity's conclusion or as otherwise identified within this Land Use Code.
 2. Full cutoff street lighting as part of a federal, state, or municipal installation.
 3. Holiday lighting before and after the holiday.
 4. Specialized lighting necessary for safety, such as temporary lighting associated with emergency operations, road hazard warnings, etc.
 5. Traffic control signals and devices.
 6. Sensor activated luminaries if:

² Added exemptions that are common to Colorado jurisdictions
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- a. It is located in a manner that prevents glare and lighting onto properties of others or into the public right-of-way.
 - b. The luminaire is set to only go on when activated by motion, and to go off within five minutes after activation has ceased.
 - c. The luminaire is not triggered by activity off the property.
7. Floodlights with external shielding can be deflected up to 25 degrees from a vertical plane as measured through the central axis of the light beam from the luminaire, only if the luminaire does not cause glare or light to shine on adjacent property or public rights-of-way.
8. Federally funded and state funded roadway construction projects are exempted from the requirements of this Section only to the extent it is necessary to comply with federal and state requirements.
9. Exterior residential fixtures which consist of lamp types with an output of 800 lumens or less (approximate to a 60-watt incandescent bulb or nine-watt LED) are exempt from these regulations, if the fixture types are compliant with those allowed in this Section.
10. Uplighting for flags, address markers, trees, architectural features, and low-voltage landscape lighting, provided that the luminaire is located, aimed and shielded so that direct illumination is focused exclusively on the object and away from adjoining properties and the public street right-of-way. Architectural features may be illuminated by uplighting provided that the light is effectively contained by the structure. In all cases, uplighting must not cause glare or light trespass. Landscape lighting is low voltage (24 volts or less), and is controlled by a photocell and timer set to terminate by 12:00 a.m.
11. Fossil fuel light produced directly or indirectly by the combustion of natural gas or other utility-type fossil fuels are exempt from these standards.

5.02.3 Standards. All site lighting for nonresidential uses shall conform to the standards established below.

A. Lighting Levels. Light levels shall follow the standards prescribed in Table XXX3.

Table XX: Exterior Lighting Levels

Exterior Lighting Levels		
Area	Minimum foot-candles	Maximum foot-candles
Parking areas/pedestrian walkways	1	10
Loading facilities	5	20
Under-canopy fueling area	20	40

³ Provide appropriate citation when other sections are complete

Off-site (20 ft beyond property line on residential area or public right-of-way)	--	0.1 (as a direct result of on-site lighting)

Design Standards. The lighting plan shall meet the following design standards:

1. Prohibited Lighting. Site lighting that may be confused with warning, emergency or traffic signals is prohibited.
2. Shielding. Light sources shall be concealed and fully shielded and shall feature sharp cut-off capability minimizing up-light, spill-light, glare, and diffusion. Under-canopy fueling areas shall feature flush mount, flat lens light fixtures. (Ord. 11-2007 §1)
3. Light Spillover. All outdoor lighting systems shall be designed and operated so that the area ten feet beyond the property line of the premises receives no more than one foot-candle in nonresidential zoned areas, and one quarter of a foot-candle for properties adjoining residential districts.

5.02.4 Lighting Plan.

- A. Generally. A lighting plan indicating location and type of all outdoor light sources and indicating lighting levels achieved at all points on the site is submitted with a site plan application. For projects not requiring Director or Planning Commission review, the lighting plan is submitted at the time of building permit application.
- B. Required Information. Additionally, a lighting plan shall include the following information for review:
 1. Plans indicating the location, type, intensity, and height of luminaries including both building and ground-mounted fixtures;
 2. A description of the luminaries, including lamps, poles or other supports and shielding devices, which may be provided as catalogue illustrations from the manufacturer;
 3. Photometric data, including that furnished by the manufacturer, showing the angle of light emission and the foot-candles on the ground; and
 4. Any additional information required by the Town needed to determine compliance with this Section.

5.03 Fences

5.03.1 Purpose. The purposes of this Section are to:

- A. Ensure that walls and fences are attractive and in character with the neighborhood.
- B. Maintain fences, recognizing that they are used to create privacy.
- C. Encourage privacy fences located close to residences or other primary buildings on a property and not alongside and rear property lines.

5.03.2 Applicability. This Section applies to all fences within the Town. All fences installed after the effective date of this Land Use Code complies with this Section.

5.03.3 General Provisions.

A. Compatibility.

1. Walls and fences are architecturally compatible with the style, materials, and colors of the principal buildings on the same lot. If used along collector or arterial streets, those features are made visually interesting by integrating architectural elements, such as brick or stone columns, varying the alignment or setback of the fence, softening the appearance of fence lines with plantings or through similar techniques.
2. A fence or wall may not consist of a solid, unbroken expanse for more than fifty (50) feet.

B. Materials.

1. Stone walls, or brick walls with a stone or cast stone cap, treated wood fences, vinyl, decorative metal, cast iron fences, stucco walls and stone piers are allowed.
2. Hedges may be used in the same manner and for the same purposes as a fence or wall.
3. Solid walls and fences are permitted only in rear and side yards.
4. Retaining walls are permitted where required for landscaping or architectural purposes.
5. Fences used in front yards (being the yard area that the primary or front entrance of the primary building on the property is oriented towards) are at least fifty percent (50%) open. Allowable fences within front yards are split rail, wrought iron, picket or other standard residential fences of fences of similar material or nature approved by the Director or designee.
6. Other materials may be incorporated in fences and walls by Board of Trustees approval.

C. Prohibited Materials.

1. Fencing, including concertina or razor wire, are prohibited unless specifically allowed by the Board of Trustees.
2. Metal panel fences are prohibited.
3. Fences constructed of wood or plastic pallets are prohibited.
4. Barbed wire or electrically charged fences are only allowed in the Agricultural (A) or Rural Residential (RR) Districts.
5. Electrically charged fences shall have signage at least every twenty-five (25) feet identifying that fencing as being electrically charged.
6. Chain link fencing with or without slats is not allowed as a fencing material for screening purposes.

- D. Retaining Walls. Retaining walls are designed to resist loads due to the lateral pressure of retained material in accordance with accepted engineering practice and are not unsightly or detrimental to abutting property.
- E. Height Limitations. Fences or walls are:
1. No more than forty-two (42) inches high between the front building line and the front property line. These walls are not solid except for retaining walls. For corner lots, front yard fence regulations apply to both street sides of the lot.
 2. No more than forty-two (42) inches high if located on a side yard line in the front yard, except if approved by the Board of Trustees and required for unique security purposes. These fences and walls are not solid, except for retaining walls.
 3. No more than thirty (30) inches high when located within the site distance triangle, and fences or walls within this site distance triangle are not solid. In the Industrial (I) Zone District, chain link fence is permitted if the height of the fence is not higher than six (6) feet, the fence is not used for screening, and the fencing does not obstruct visibility at any intersection.
 4. No more than six (6) feet high for an opaque privacy fence located on a rear property line or on a side yard line in the rear yard.
 5. Fences around a recreation court (e.g., tennis, squash racket, squash tennis or badminton) or around a publicly owned recreation area may exceed six (6) feet in height if the fence is at least fifty percent (50%) open.
- F. Maintenance. Dilapidated, unsightly or dangerous fences shall be removed or repaired when removal is ordered by the Code Enforcement Officer. Hedges are maintained in a healthy condition, trimmed, and pruned as appropriate for the plant type. Dead plant material in hedges shall be removed or replaced as appropriate when ordered by the Code Enforcement Officer. Hedges shall not encroach upon sidewalks or street rights-of-way. (Ord. 11-2007 §1)

5.04 Landscaping and Screening

5.04.1 General Design Principles

- A. Purpose and Intent: The intent of the landscape standards is to preserve the Town's special character and integrate and enhance new development by promoting quality landscape design that:
1. Reinforces the identity of the community and each neighborhood;
 2. Provides tree-lined streets;
 3. Anchors new buildings in the landscape;

4. Provides adequate vegetation to for screening and buffering between land uses;
 5. Provides tree canopies to reduce urban heat island effect;
 6. Preserves existing trees and establishes procedures for replacing removed trees;
 7. Is conscientious of water usage;
 8. Identifies climate appropriate landscape material; and
- B. Protects natural resources such as valuable wildlife habitat.
- C. General Provisions. All land development applications shall be accompanied by a landscape plan prepared by a Colorado-licensed Landscape Architect. Building permit applications for individual single-family residences will not require landscape plans. However, all landscaping within the community shall comply with the intent of these regulations.
1. Site considerations. Landscape improvements shall be an integral part of the overall site design for each property and shall follow these objectives:
 - a. Landscape improvements in all developments shall be consistent with the character of the proposed development and the surrounding area to reinforce neighborhood identity.
 - b. All landscape plans shall incorporate a mix of shade trees, ornamental trees, evergreen trees and shrubs, deciduous shrubs, ornamental grasses, and perennials.
 - c. Landscape design shall enhance natural features, drainage ways, and environmental resources.
 - d. All landscape improvements shall be designed for mature landscapes and shall provide appropriate visibility for cars and pedestrians.
 - e. Buildings and parking areas shall be located to preserve existing trees, environmental resources, and natural drainage ways to the greatest extent possible.
 - f. Trees shall be located to provide summer shade and limit winter shade on walks and streets.
 - g. Landscaping provisions shall not be cumulative or overlapping. When more than one standard applies, the most restrictive landscape standard shall apply.
 2. Environmental considerations. Landscapes shall follow these xeriscape design principles to facilitate water conservation:
 - a. Use appropriate turf varieties to minimize the use of bluegrass.
 - b. Design Landscape Plans for water efficiency by arranging plant material by water use hydrozone with higher water use plants grouped together and lower water use plants grouped together.
 - c. Use bioswales, water quality ponds, and rain gardens to filter runoff from parking lots, streets, and other impervious surfaces.
 - d. Design with xeric and native plant material in accordance with the Design Manual.

- e. Improve the soil with organic matter and ensure proper landscape and irrigation maintenance per section 5.04.3 All areas disturbed by construction shall be reseeded to prevent erosion. Native, noninvasive grasses shall be used for revegetation where practical. Weed control and sediment and erosion control is the responsibility of the landowner on all reseeded areas.

5.04.2 Landscape and Irrigation Design Manual

- A. These landscape standards were developed in tandem with the Wellington Waterwise Landscape and Irrigation Design Manual (herein referenced as the Design Manual) which includes additional information on the principles of waterwise landscape design. Included are:
 - 1. A series of landscape typologies illustrated to show how varying levels of water use in the landscape effect overall water savings
 - 2. Images to further represent the desired landscape character of streetscapes, parks and open space, and residential, commercial and industrial developments.
 - 3. Suggested plant list organized by water use including high, medium, low and very low water use plant suggestions which match the water requirements.

5.04.3 Plant Material Specifications.

- A. Plant material shall consist of native and regionally adapted species per the suggested plant list in the Design Manual.
- B. Prohibited plant species.
 - 1. The following trees are prohibited in the Town:
 - (1) Russian olive (an invasive species that threatens native trees in riparian ecosystems).
 - (2) Lombardy poplar (susceptible to canker-forming fungi for which there are no available controls).
 - (3) Siberian elm (can dominate native vegetation, especially in disturbed areas; is weak-wooded and subject to continuous dieback when large; can be devastated by the elm leaf beetle).
 - (4) Boxelder maple (primary host plant of the boxelder bug).
 - (5) Cotton-bearing cottonwood (Often considered a public nuisance.)
 - 2. Ash, *Fraxinus* species (primary host to the destructive Emerald Ash Borer)
 - 3. Plants listed as an invasive species by the Colorado State University Extension Service are prohibited.
 - 4. Plants listed on the Colorado Noxious Weed List are prohibited.

- C. Landscapes shall consist of a variety of species to enhance biodiversity. No one (1) species may make up more than twenty-five percent (25%) of the total non-grass plant materials on one (1) site.
- D. Up to 20% of required site trees (exclusive of street trees) may be substituted with shrubs or ornamental grasses at a rate of five (5) shrubs or ornamental grasses per one tree.
- E. Minimum planting sizes on all required landscaping shall be as follows:
 - 1. Deciduous Trees: two-inch (2") caliper
 - 2. Ornamental Trees: one-and-one-half-inch (1.5") caliper
 - 3. Evergreen Trees: six-foot (6') tall
 - 4. Shrubs: five (5) gallon size
- F. Landscaping shall be no more than thirty (30") inches high when located in a sight distance triangle.
- G. Trees may not be located within five feet (5') of gas, electric, and cable lines.
- H. Trees shall not be located within ten feet (10') of water and sewer lines.
- I. Ornamental trees shall not be located within fifteen feet (15') of streetlights.
- J. Shade trees shall not be located within forty feet (40') of streetlights.
- K. Trees planted in lawn areas shall include a five-foot diameter (5' dia) ring of mulch at the base to provide separation between grass thatch and the trunk of the tree.
- L. No plastic shall be used for weed control barrier under mulches. When used, weed barrier shall be nonwoven polypropylene that allows water and air to penetrate.
- M. All planting areas shall be mulched to a minimum depth of three inches (3") for mulch material $\frac{3}{4}$ " in size or smaller and a minimum of four inches (4") for material larger than $\frac{3}{4}$ " in size. No planting area shall contain mulch alone without plantings.
- N. All landscape areas shall be amended with organic compost at a rate of four cubic yards per one thousand square feet (4 cu yds / 1,000 sf), tilled into the top eight inches (8") of soil. Areas planted with native grass seed mixes can reduce the compost rate to two cubic yards per one thousand square feet (2 cu yds / 1,000 sf).
- O. Required plant materials shall be grown in a licensed nursery in accordance with proper horticultural practice. Plants shall be healthy, well-branched, vigorous stock with a growth habit normal to the species and variety and free of diseases, insects and injuries.
- P. All plants shall conform to standards for measurements, grading, branching, quality, ball and burlapping as stated in the American Standard for Nursery Stock, 1990 Edition, American Association of Nurserymen, Inc. (AAN-ASNS) and the Colorado Nursery Act of 1965 (CNA).
- Q. All landscaping shall be irrigated with an efficient, automated underground irrigation system as required for plant establishment and maintenance.

1. Use of nontreated (non-potable) water for irrigation is required if a permanent, suitable supply is available.
2. Temporary above ground irrigation may be used to establish native grasses and vegetation but must be removed following the second growing season after installation.
3. All irrigation systems shall consist of efficient equipment such as:
 - a. Controllers tied to a weather application to ensure system efficiency;
 - b. Rain sensors; and/or
 - c. Efficient spray heads such as the Hunter MP Rotator
4. Guarantee of installation. Required landscape improvements shall be installed prior to issuance of a certificate of occupancy (CO) for all new construction and redeveloped sites. If weather conditions prevent installation, the developer shall post a financial guarantee for the improvements in an amount equal to one hundred twenty-five percent (125%) of an approved line item cost estimate. The guarantee shall be released upon completion of the installation of the landscaping and acceptance by the Town.
5. Maintenance. To provide for the ongoing health and appearance of landscape improvements, all landscaping shall be maintained and replaced by the landowner or occupant as necessary. All property owners or occupants shall be responsible for maintenance of landscaping within the portion of the public right-of-way between the back of the curb or street pavement and the adjacent property unless the Town has specifically agreed in a development agreement to take over maintenance.

5.04.4 Submittal standards for landscape and irrigation plans.

- A. All land development applications shall be accompanied by a landscape plan prepared by a Colorado-licensed Landscape Architect and shall include the following at a minimum.
 1. Landscape plan showing plant material sizes at maturity.
 2. Detailed plant list identifying common and botanical names of plant species, specified size of plant material, quantity, and water usage based on the water usage types detailed in the Design Manual:
 3. Total water usage calculations in table format per below:

Water Usage Category	Total Area per Category	Total Gallons of Water per Square Foot per Category
High Water Use		
Medium Water Use		
Low Water Use		

Xeric Water Use ¹		
Totals		

¹ Xeric includes hardscape and other landscape elements that do not require any supplemental watering.

4. Detail drawings showing planting techniques for each type of plant material proposed (trees, shrubs, ornamental grasses, perennials)
5. Standard landscape notes stating the following:
 - a. Commitment to install soil amendment, and
 - b. General planting and maintenance specifications.
6. Tree preservation table showing how the development application plans to meet the requirements of Section 5.04.14 as applicable.
7. General installation and maintenance specifications.
- B. All landscape plans shall be accompanied by an irrigation plan prepared by a Colorado-licensed Landscape Architect or Irrigation Professional to include the following at a minimum:
 1. Irrigation tap calculations;
 2. Layout of all irrigation equipment;
 3. Schedule of all irrigation equipment;
 4. Statement of water saving methodology; and
 5. General installation and maintenance specifications.
- C. Where non-potable irrigation systems are not available and the Town has approved a connection to the Town's domestic water system, all water taps for irrigation purposes shall be required to be installed and metered separately from any other domestic water tap. Raw water dedication requirements and utility billing charges shall be paid in accordance with a fee schedule adopted by the Town.

5.04.5 Streetscape Landscape Standards

- A. Purpose and intent: Local streetscapes shall be tree lined and include a waterwise and balanced approach to design of plant material for year-round visual interest.
- B. Applicability: The following requirements shall apply to all proposed commercial and multi-family development along collector and arterial streets as well as any single-family subdivisions with tree lawns along local streets.
- C. General design standards:
 1. All streetscapes shall include no more than fifty percent (50%) high water use plant material such as irrigated turfgrass.

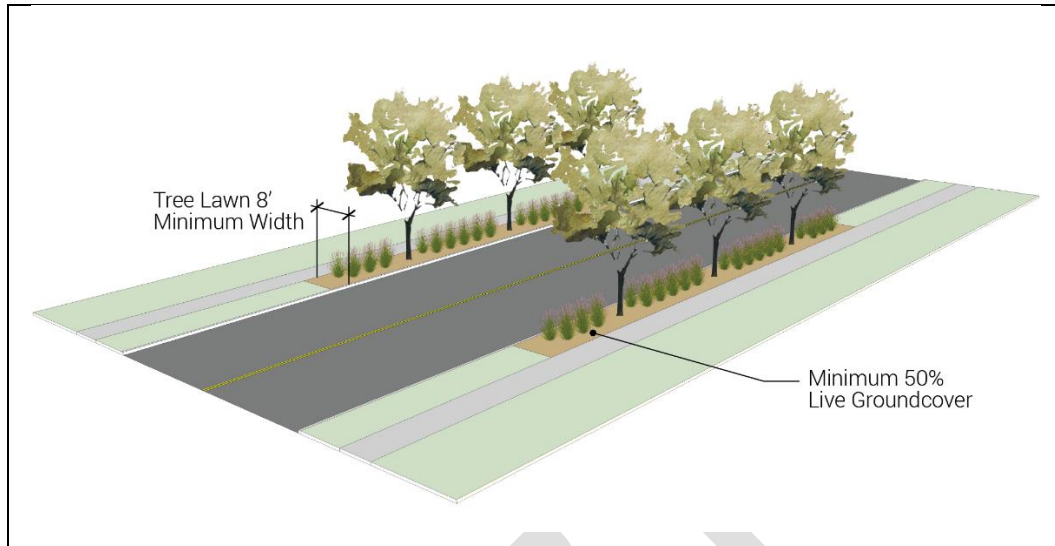
2. A minimum of one (1) deciduous or ornamental tree is required for every forty (40) linear feet of block frontage or portion thereof. Street trees shall be planted within the tree lawn portion of the right-of-way with adequate spacing per the species to allow for the mature spread of the trees.
 - a. Arterial streets shall include a minimum ten foot (10') wide tree lawn to be landscaped with a minimum fifty percent (50%) live ground cover including a combination of trees, perennials, ornamental grasses, and shrubs. clustered into planting beds.

Figure #

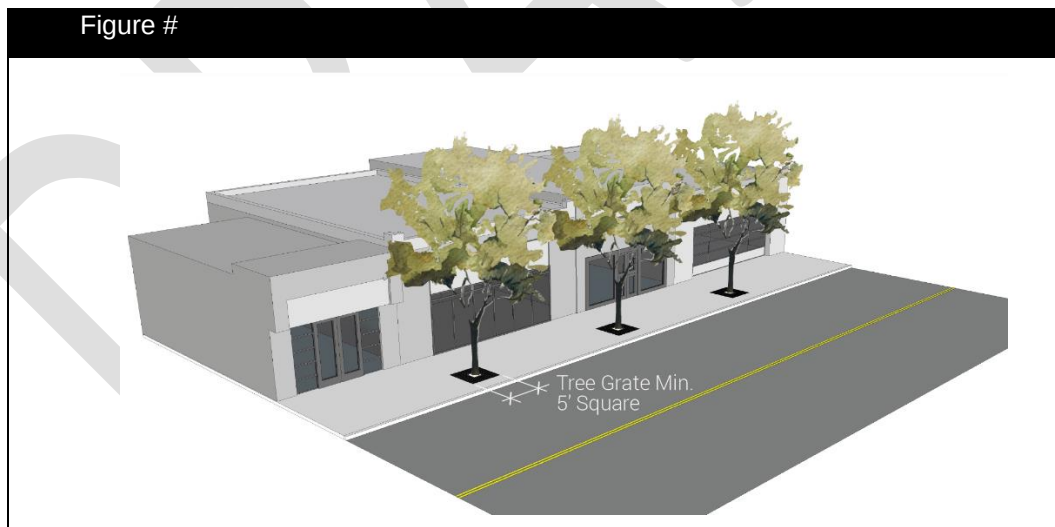


- b. All collector streets shall include a minimum eight foot (8') wide tree lawn to be landscaped with a minimum of fifty percent (50%) live ground cover, including a combination of trees, perennials, ornamental grasses, or shrubs.

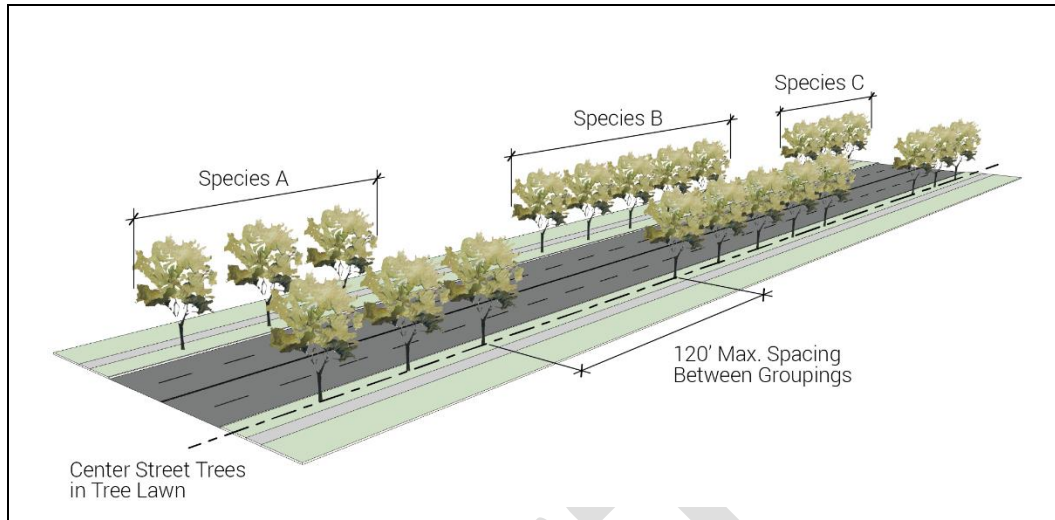
Figure #



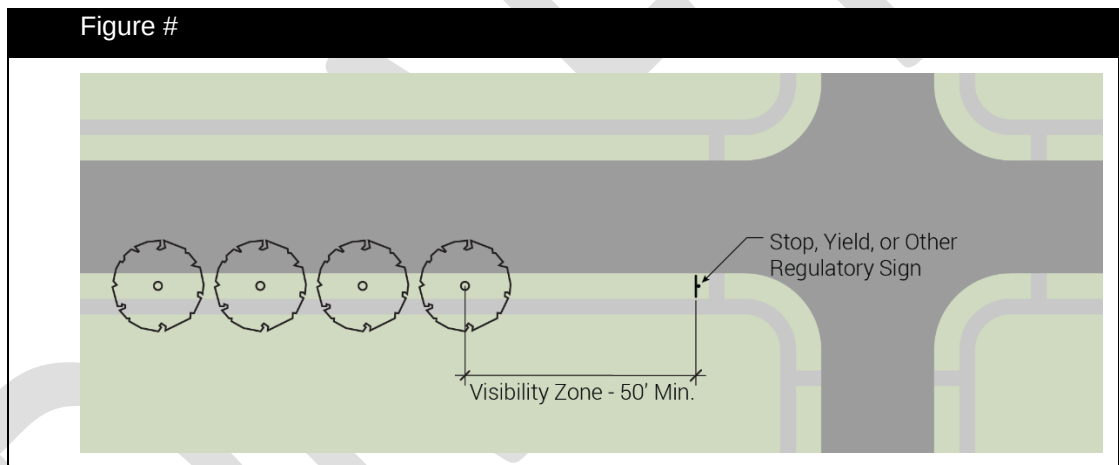
- c. If tree lawns are provided on local streets in association with a single-family subdivision, then they shall meet the Collector Street tree lawn requirements in subsection (b) above.
3. In the Downtown Core, street trees shall be placed in decorative tree grates with a minimum dimension of five (5) feet square. Soil volume shall be ## which can be achieved by use of structural cells, suspended pavements, or other methods as approved by the Planning Department.



1. Street trees shall be aligned in straight rows centered within the tree lawn in groupings of like species. No gap of groupings shall exceed one hundred twenty feet (120') in length.



2. Street trees shall be set back at least fifty feet (50') from the face of stop signs in order to maintain a regulatory sign visibility zone. Street trees shall be set back a minimum of ten feet (10') from all other regulatory traffic control signs as related to the direction of travel.



3. Street trees shall be limbed up to maintain a minimum eight-foot (8') clearance above all sidewalks. <Include graphic>
4. No street trees more than twenty-five feet (25') in height at maturity shall be planted under or within ten feet (10') of overhead powerlines.
5. All street trees shall meet the suggested plant species standards detailed in the Design Manual.
6. All streetscapes shall include an automatic underground irrigation system for all landscaping within the rights-of-way.
7. Trees installed along streets that will be widened in the future shall take into account plans for future widening of streets so that established trees will not be disturbed during future construction.

8. Development shall provide a mechanism for long-term maintenance of streetscape landscaping, such as a homeowners' association and covenants.

5.04.6 Park and Open Space Landscape Standards

- A. Purpose and intent: Landscaping in park and open space areas that are commonly used by the public for passive and active recreation shall be appropriate to the use and function of the area, respectful of water conservation practices, and include trees, shrubs, ground cover, and site furnishings appropriate to the use.
- B. Applicability: The following requirements shall apply to all new development of public parks, pocket parks, detention ponds, trail connections and common open space areas for both public and HOA use.
- C. General design standards:
 1. All parks shall be landscaped and programmed to create a balance of plant material not to exceed fifty percent (50%) high water species.
 2. All park and open space areas shall include site trees at a rate of a minimum of one (1) tree per one thousand (1,000) square feet of landscaped area, distributed appropriately throughout the site.
 3. Required trees shall be placed in upland areas, above the anticipated high-water mark or floodway of detention ponds or drainage ways.
 4. Only high traffic areas such as sport fields and informal play space adjacent to playgrounds shall contain high water turf.
 5. Park periphery and detention pond areas shall consist of low water or native plant material and grass seed mix.
 6. Common open spaces and trail connections shall be landscaped with a balance of low water or native plant material and grass seed mix to reduce the need for supplemental irrigation in hard to reach areas.
 7. The retention of native areas for purposes of maintaining viewsheds or healthy existing ecosystems are highly encouraged.
 - a. Existing plant material shall be identified on the Landscape Plan with a statement explaining how the native area will be protected from construction.
 - b. These areas shall be excluded from the landscape area used to calculate required site trees per subsection C.1 above.
 8. Parking lots shall be landscaped per Section 5.04.8.
 9. Development shall provide a mechanism such as a homeowners' association and covenants for long-term maintenance of parks, detention ponds, and common open space, in order to ensure the continued upkeep of the property.

5.04.7 Standard Lot Detached and Attached Single-Family Residential Development Landscape Standards

- A. Purpose and intent: To ensure that single-family residences contain consistently landscaped front yards and are designed with water conservation in mind.
- B. Applicability: In addition to landscaping the right-of-way tree lawn, detached and attached single-family parcels shall meet the following standards.
- C. General design standards:
 - 1. Landscaping on a single-family lot under one half (1/2) acre in size shall include no more than fifty percent (50%) high water use plant material such as irrigated turfgrass.
 - 2. There shall be a minimum of seventy-five percent (75%) live materials between the front of the single-family residential structure and the curb, excluding paved driveway areas.
 - 3. Each single-family residential owner shall maintain the owner's yard and landscaping within the adjacent road right-of-way.

5.04.8 Large Lot Single-Family Residential Development Landscape Standards

- A. Purpose and intent: To ensure higher water use landscape areas remain close to the perimeter of the residence, therefore preserving the native resources on the outskirts of the property both for purposes of water conservation and preservation of the natural character.
- B. Applicability: Landscaping of large single-family rural density lots of one-half (1/2) acre or more in size (R-1 zone district) shall meet the following standards.
- C. General design standards:
 - 1. Shall include no more than twenty five percent (25%) high water use plant material, such as irrigated turfgrass, and no more than one quarter (1/4) acre irrigated, ornamental plant material.
 - 2. Each single-family residential owner shall maintain the yard and landscaping within the adjacent road right-of-way.

5.04.9 Multi-Family Residential Development Landscape Standards

- A. Purpose and intent: To ensure that all multi-family developments contain water conscious, consistent landscapes that are designed to enhance the overall appearance and functionality of the development while integrating the project into the surrounding neighborhood.
- B. Applicability: In addition to right-of-way landscaping, multi-family developments and attached single family developments grouped with common areas and/or streetscape improvements that require a site plan application shall meet the following standards.
- C. General design standards:
 - 1. A minimum of thirty percent (30%) of the site (gross) shall be landscaped.

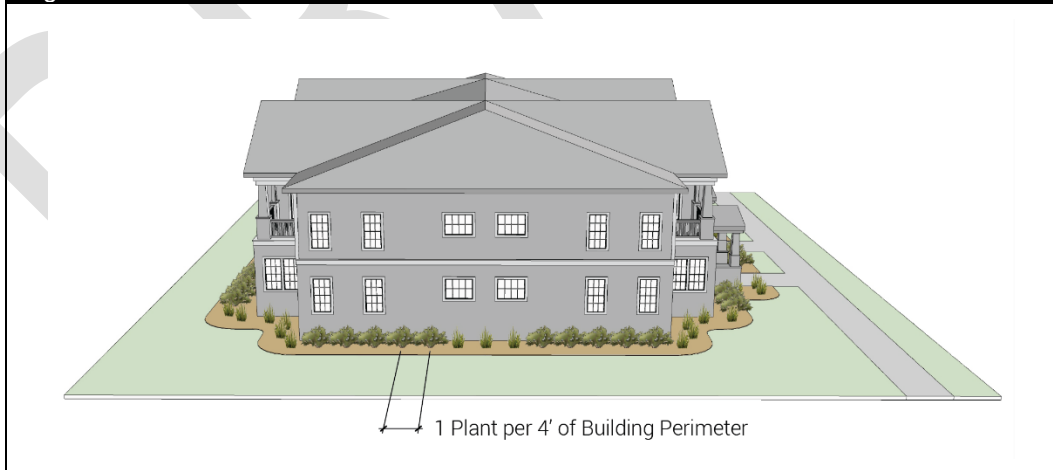
2. Landscape areas shall include no more than forty percent (40%) high water use plant material such as irrigated turfgrass.
3. Plant material shall be arranged to screen utility hardware and mechanical equipment, define entrances, and soften featureless walls.
4. Building perimeter landscape requirement:
 - a. A planting area with a minimum width of six feet (6') shall be provided around the foundation of all.

Figure #



- b. The total number of plants shall equal one (1) plant per four linear feet (4') of building perimeter at the foundation.

Figure #



- c. A minimum of five percent (5%) of the building perimeter requirement shall include trees.
 - d. Required plants shall contain a mix of trees, shrubs, ornamental grasses, and perennials.
5. Street right-of-way buffer requirement:

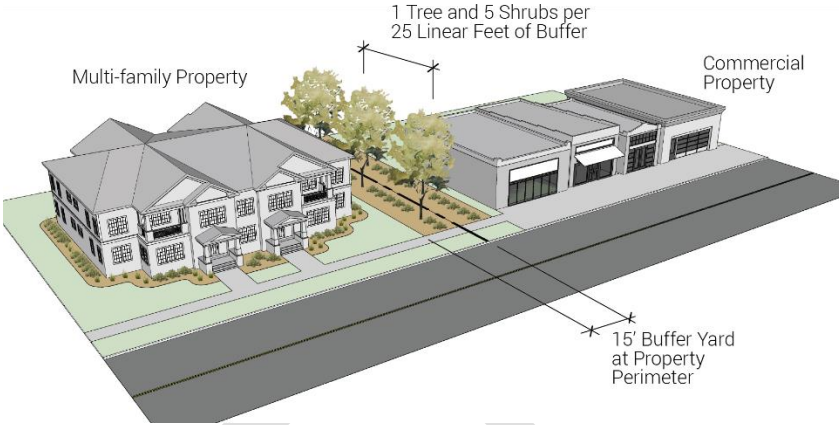
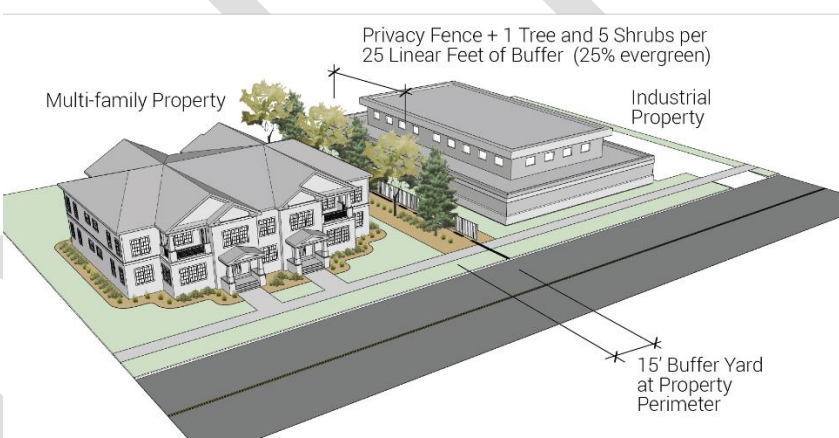
- e. A minimum buffer width of twenty feet (20') shall be provided between multi-family buildings and all arterial and collector streets and shall contain one (1) tree and five (5) shrubs or ornamental grasses per forty lineal feet (40') of required buffer. Signage may be included in this setback.

Figure #



6. Site perimeter landscape buffer requirement:

Adjacent Use	Buffer Yard Requirement	Example Image
Detached or Attached Single-family, Multi-family	10' wide 1 tree and 5 shrubs per 40 linear feet	

Adjacent Use	Buffer Yard Requirement	Example Image
Commercial	15' wide 1 tree and 5 shrubs per 25 linear feet (50% shall be evergreen)	
Industrial	15' wide 6' privacy fence plus 1 tree and 5 shrubs per 25 linear feet (50% shall be evergreen)	

7. Use native grass for areas that will not function as active recreation areas.

8. Parking lots shall be landscaped per Section 5.04.13.

9. Stormwater detention facilities shall be in accordance with 5.04.15

D. The building owner or occupant shall maintain the yard and landscaping within the adjacent road right-of-way.

5.04.10 Commercial and Mixed-Use Development Landscape Standards

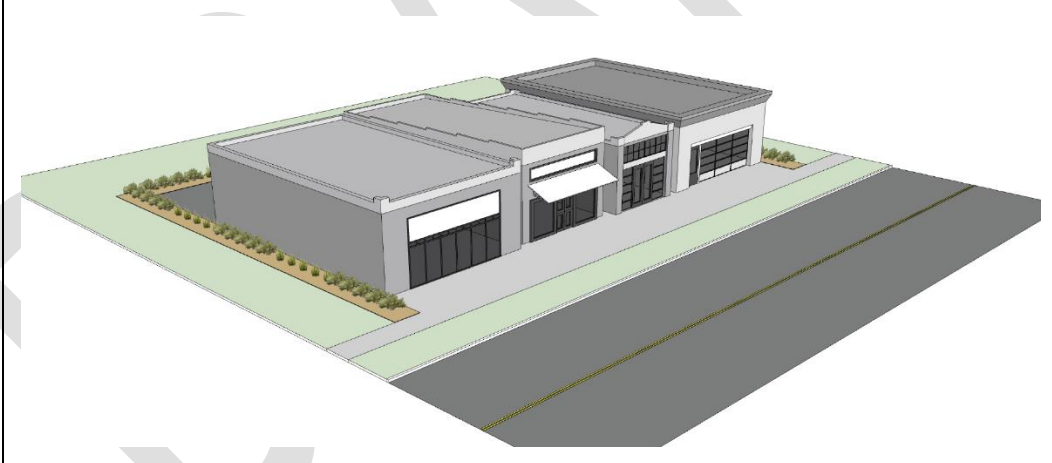
A. Purpose and intent: To ensure water conscious landscape improvements that are designed to enhance the overall appearance of the development and integrate the project with adjacent land uses and into the surrounding neighborhood. All improvements shall consider the people who will use the site, travel through or by the site and adjacent land uses.

B. Applicability: All development in Commercial Zone Districts C1 and C3 shall meet the following standards.

C. General design standards:

1. A minimum of fifteen percent (15%) of the site (gross) shall be landscaped area.
2. Landscape areas shall include no more than thirty percent (30%) high water use plant material such as irrigated turfgrass.
3. Pedestrian walks and other hardscape landscape features and amenities, such as outdoor seating areas, and plazas with recreation and entertainment areas, water features, and public art, and approved permeable pavement may comprise up to fifty percent (50%) of the required landscaped area.
4. Integrate activities on the subject property with adjacent land uses by utilizing a combination of landscaping, building orientation and appropriate architectural elements.
5. Landscaping is required around the perimeter of the building along building elevations that face public streets, transportation corridors, public open space, residential neighborhoods, or whenever an entrance door is present.
 - a. Building perimeter landscaping shall be located within twenty feet (20') of the face of the building unless prevented by loading docks.
 - b. Landscaping may be installed in planting beds with a minimum width of six feet (6') or raised planters.

Figure #



- c. A minimum of 1 tree shall be provided for every forty linear feet (40') or building perimeter.
 - d. Required plants shall contain a mix of trees, shrubs, ornamental grasses and perennials.
6. Site perimeter landscape buffer requirement:

Adjacent Use	Buffer Yard Width and Quantity	Example Image
Single-family, townhome, multi-family	15' wide 1 tree and 5 shrubs per 25 linear feet (50% shall be evergreen)	
Commercial	10' wide 1 tree and 5 shrubs per 40 linear feet	
Industrial	15' 1 tree and 5 shrubs per 25 linear feet (50% shall be evergreen)	

7. Parking lots shall be landscaped per Section 5.04.8.

8. Stormwater detention facilities shall be in accordance with 5.04.15.

9. All service, loading, and storage areas visible from residential property, public right-of-way, or public trails and open space shall be screened by fences, walls, berms, or any combination thereof in addition to landscaping.
 - a. No fence or wall shall exceed eight feet (8') in height.
 - b. Landscaping along fences or walls shall consist of one (1) tree and ten (10) shrubs or ornamental grasses per forty linear feet.
 - c. Required screening shall be approved with a site plan or building permit, as applicable.
 - d. Chain link fencing with slats, tires or used building materials are not acceptable screening materials.
- D. The building owner or occupant shall maintain the yard and landscaping within the adjacent road right-of-way.

5.04.11 Downtown Core Landscape Standards

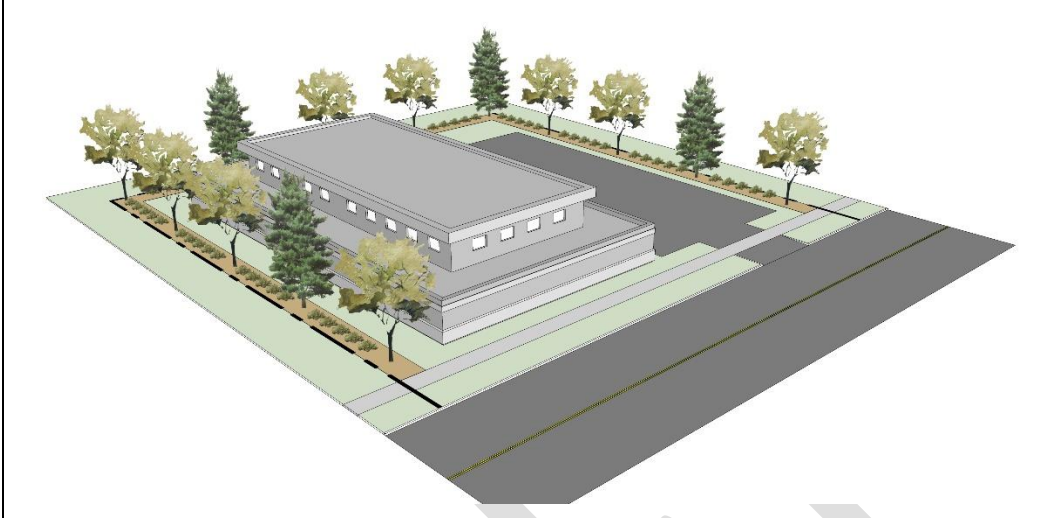
- A. Purpose and intent: To ensure that pervious areas are incorporated, the urban heat island is mitigated with shade trees, and water conscious landscape design is implemented within the Downtown Core.
- B. Applicability: All development and redevelopment in the Downtown Core shall meet the following standards.
- C. General design standards:
 1. Street trees shall be provided per section 5.04.5.
 2. Flush mounted or raised landscape planters shall be strategically placed along Cleveland Avenue sidewalk to enhance building entries and provide permeability but shall not block the flow of pedestrian traffic, ADA accessibility requirements, or interfere with utilities or drainage.

5.04.12 Industrial Development Landscape Standards

- A. Purpose and intent: To ensure landscape improvements are designed primarily at the public facing building entry to be consistent with commercial landscape standards and at the perimeter for purposes of screening industrial activities from the exterior of the property.
- B. Applicability: All development in Light Industrial (LI) and Industrial (I) Zone Districts shall meet the following standards.
- C. General design standards:
 1. Landscape areas shall include no more than thirty percent (30%) high water use plant material such as irrigated turfgrass.
 2. The perimeter of the property shall include landscape area with a minimum width of eight feet (8') to include a pervious surface such as rock mulch and one (1) tree per forty (40)

linear feet. A minimum of twenty-five (25%) of the perimeter trees shall be evergreen. Stormwater detention ponds may be included in this landscape requirement.

Figure #



3. The area between the primary building façade and the public right of way shall meet the commercial design standards detailed in 5.04.10 with all landscape areas including a minimum of seventy-five (75%) live cover.
 4. Parking lots shall be landscaped per Section 5.04.13.
 5. Stormwater detention facilities shall be in accordance with 5.04.15
- D. The building owner or occupant shall maintain the yard and landscaping within the adjacent road right-of-way.

5.04.13 Parking Lot Landscape Standards

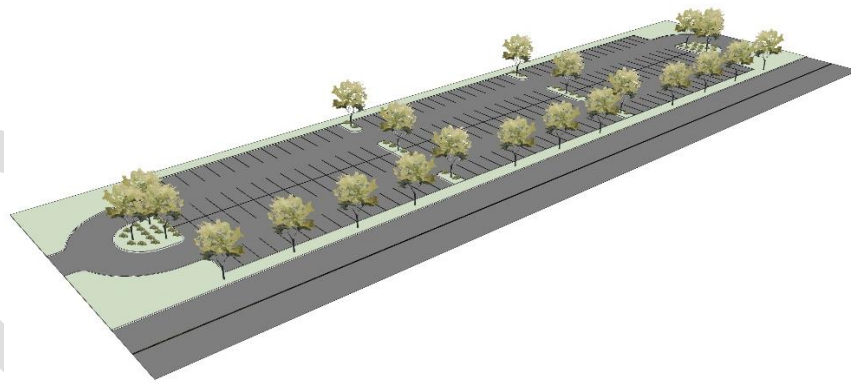
- A. Purpose and intent: Parking lot landscaping is intended to break up large expanses of pavement, create shade, buffer views of parking lots from adjacent streets and development, and enhance the overall appearance of each project.
- B. Applicability: All parking lots with ten (10) spaces or more shall be subject to the following requirements.
- C. General design standards.
 1. All combined parking lot landscape areas shall include no more than twenty percent (20%) high water use plant material.
 2. Interior parking lot landscape requirement:
 - a. A minimum of one landscape island per fifteen (15) parking spaces with a minimum width of nine feet (9').

Figure #



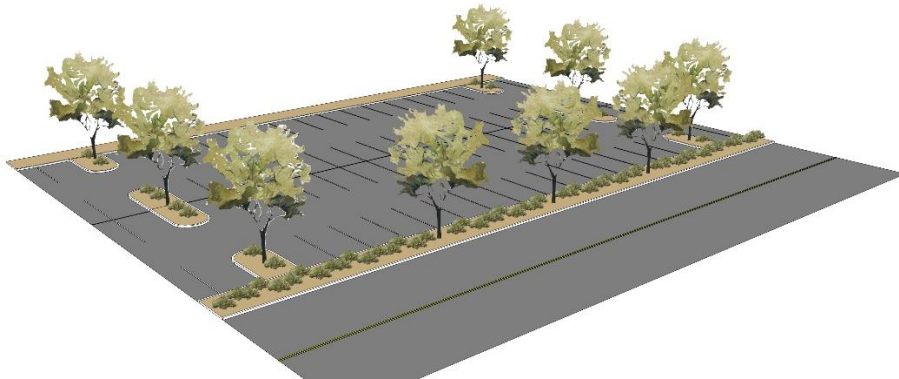
- b. Each island shall contain one (1) shade tree and seventy five percent (75%) live plant material cover.
- 3. Perimeter parking lot landscape requirement:
 - a. A minimum eight-foot (8') wide landscape area shall be provided at the perimeter of surface parking lots abutting any public right-of-way.
 - b. A minimum of one (1) tree per forty (40') linear feet of required perimeter landscape area.

Figure #



- c. Screen headlights with one of the following options:
 - i. A hedge of shrubs and ornamental grasses with a minimum height of thirty inches (30") to screen seventy five percent (75%) of headlights;

Figure #



- ii. A berm with a minimum of thirty inches (30") height; or

Figure #



- iii. A masonry wall with a height between three and four feet (3-4') paired with landscape material for at least fifty percent (50%) of the length of the landscape area placed on the street side of the wall.

Figure #



- d. Parking lots of one hundred (100) stalls or more shall provide a twenty foot (20') wide median for pedestrian access and additional shade every fourth row of parking to include the following:
 - i. A minimum five foot (5') wide sidewalk
 - ii. A minimum of one (1) tree per forty (40') lineal feet of median
 - iii. A minimum of seventy five percent (75%) live plant material cover

Figure #



4. Limit areas of irrigated sod to landscape areas with a minimum width of ten (10') feet. Irrigated sod shall not be located within interior parking lot islands.
5. Irrigation sleeved shall be installed to interior islands prior to paving of parking lots.
6. All landscaping within and adjacent to parking lots shall be owned and maintained by the landowner or occupant.
7. The Town may require that an owner requesting development approvals shall provide a mechanism for ensuring that landscape improvements will be maintained in order to ensure the continued upkeep of the property. (Ord. 11-2007 §1)

5.04.14 Tree Preservation Standards

- A. Purpose and intent: Preserve the urban tree canopy.
- B. Applicability: All new and infill development and redevelopment.
 1. Any tree that fails to survive within five years of installation, regardless of size, shall be replaced with the same species or a species with similar mature size.
 2. All existing trees six-inch (6") caliper or larger proposed for removal on any new or infill development or redevelopment site shall be mitigated at the following rate:

<i>Tree to be removed</i>	<i>Replace with</i>
6" to 12" caliper tree	One 2" caliper min. tree

12" to 24" caliper tree	Two 2" caliper min. trees
24" or larger caliper tree	Three 2" caliper min. trees

3. If it is determined by the Planning Director that the required trees for mitigation will not reasonably fit on the site without crowding out other required site or street trees, then the applicant shall pay a fee in lieu of mitigation in accordance with the Town's adopted fee schedule.

5.04.15 Storm Drainage Facility Standards

- A. Purpose and intent. Stormwater facilities shall be installed to serve a development to promote innovative and effective land and water management techniques that protect and enhance water quality.
- B. Applicability. All storm drainage facilities shall be appropriately landscaped.
- C. General design standards:
 1. Storm drainage improvements shall be constructed to serve development and landscaping associated with storm drainage facilities shall be integrated into the overall design of the project.
 2. Landscaping installed to address storm drainage shall enhance the overall appearance of the project, prevent erosion, and improve water quality of stormwater runoff whenever possible.
 3. Storm drainage facilities may function as open space for active recreation, trail corridors, or habitat enhancement areas if they are designed for such use.
 4. The use of planting strips and shallow, landscaped depressions in parking lots and along roads is encouraged to help trap and remove pollutants from stormwater runoff.
- D. Minimum storm drainage improvements shall be constructed such that:
 1. All facilities shall be seeded to grass appropriate to the function of the area.
 2. Areas to be used for active recreation shall be seeded to a turf-type grass and irrigated with a permanent irrigation system.
 3. Areas to be maintained for habitat enhancement shall be seeded to native grasses and wildflowers.
 4. Development shall establish complete, weed-free grass areas. Trail corridors may be seeded to native grasses if appropriately integrated with adjacent improvements.
 5. The maximum side slope of drainage facilities shall be no more than 4:1 and the minimum slope at the bottom of a drainage facility shall be no more than one-half percent (0.5%) unless otherwise approved by Town Engineer.

6. Landscape improvements shall be designed to enhance the function of the facility. Subject to water conservation policies, areas designed for recreation shall include clusters of trees to provide shade, located so they do not impair the function of the facility.
7. Habitat and water quality enhancement, including wetland plantings in low wet areas, is encouraged.
8. Ownership and maintenance. Easements for drainage facilities shall be dedicated to the Town but not accepted for maintenance and shall be maintained by the landowner or occupant unless otherwise approved by the Town.
9. Bioswales and similar forms of private storm drainage systems that are integrated into the site shall not be dedicated to the Town.

5.04.16 Screening and Buffering

- A. Purpose and intent. Buffers and screening are intended to minimize conflicts between potentially incompatible, land uses and development on abutting property.
- B. Applicability. Buffers shall be installed between parcels of different use on the property with the more intense use. For example a commercial use shall include a buffer on any property line adjacent to a residential use. Additionally, all air-conditioning units, HVAC systems, exhaust pipes or stacks, elevator housing, and telecommunications receiving devices shall be thoroughly screened from view from the public right-of-way and from adjacent properties.
- C. General design standards:
 1. All required buffers shall be located along the entire property line between the two incompatible uses and entirely on the developing property's side of the required buffer.
 2. A required buffer must not be located within the required setbacks identified in Chapter 3.
 3. Parking of vehicles and placement of buildings or structures, except for walls, fences, and landscaping, shall not be allowed in the required buffer.
 4. All buffers shall be a minimum of ten feet (10') wide and consist of a mix of evergreen and deciduous trees, shrubs and ornamental grasses at the following rates:
 - a. Four trees per one hundred linear feet with at least 20% being evergreen and a minimum height of twenty feet; and
 - b. Ten shrubs or ornamental grasses per one hundred linear feet with a minimum height of five feet.
 - c. If a six-foot high privacy fence or wall is installed, the shrub and ornamental grass requirement can be reduced by 50%.
 5. Under no circumstances shall a fence be the only screening material as a buffer between land uses.
- D. Location and screening of required loading and service areas.

1. Loading docks, solid waste facilities, recycling facilities and other service areas shall be placed to the rear or side of buildings in visually unobtrusive locations.
2. Screening and landscaping of loading areas shall prevent direct views of the loading areas and their driveways from adjacent properties or from the public rights-of-way and shall prevent spill-over glare, noise or exhaust fumes.
3. Screening and buffering of loading and service areas shall be achieved through walls, architectural features and landscaping per 5.04.16(C) above and shall be visually impervious. Building recesses or depressed access ramps are suitable options to achieve screening and shall be used in combination with walls and landscaping if they do not achieve the desired screen. (Ord. 11-2007 §1)

5.05 Off-Street Parking and Loading

5.05.1 Purpose. The purposes of this Section are to:

- A. Ensure that adequate off-street parking and loading facilities are provided for new land uses and changes in use;
- B. Minimize the negative environmental and urban design impacts that can result from excessive parking, driveways, and drive aisles within parking lots;
- C. Ensure that adequate off-street bicycle parking facilities are provided and promote parking that offers safe and attractive pedestrian routes;
- D. Establish standards and regulations for safe and well-designed parking, unloading, and vehicle circulation areas that minimize conflicts between pedestrians and vehicles within parking lots and surrounding land uses;
- E. Offer flexible means of minimizing the amount of area devoted to vehicle parking by allowing reductions in the number of required spaces in context-sensitive locations;
- F. Ensure compliance with provisions of the Americans with Disabilities Act (ADA); and
- G. Minimize the visual impact of off-street parking areas.

5.05.2 Applicability.

- A. Any new building, structure, use, redeveloped site, or enlarged or expanded existing building or use, must meet this Section's parking requirements. These developments require permanent parking and off-street loading. Parking spaces may be provided in a garage or properly surfaced open area. In residential districts, public streets designed to accommodate on-street parking may count towards the required minimum parking for a dwelling. One on-street parking space may count towards meeting the parking requirement.

- B. When a change in intensity of use of any building or structure would increase the required parking by more than ten (10) spaces or ten (10) percent, whichever is greater, through an addition or change in the number of dwelling units, gross floor area, gross leasable area, seating capacity, or other specified units of measurements, the increment of additional required parking is provided in accordance with this Section unless an adjustment is permitted in XXX⁴ below. If less than ten (10) spaces or ten (10) percent, whichever is greater, are required by a change or series of changes in use, the Director may waive up to the incremental required number of parking spaces after determining that the granting of the waiver will not be detrimental to the public welfare and will be consistent with the Comprehensive Plan.

5.05.3 Compliance Required.

- A. Off-Street Parking and Loading Review. Each application for a subdivision, site plan, zoning permit, or certificate of occupancy shall include information as to the location and dimensions of parking and loading space, and the means of ingress and egress to those spaces. This information is in sufficient detail to determine the requirements of this Land Use Code are met and shall contain necessary information required by applicable provisions of this Land Use Code.
- B. Parking Reduction Procedures. No existing or proposed parking or loading space is reduced or eliminated. Reductions in parking and loading spaces may be permitted where spaces are no longer required by these regulations or alternative spaces meeting the requirements of these regulations are provided.

5.05.4 Metrics and Interpretations for Computation.

- A. Square Footage (Floor Area). The gross building square footage, as used in this Section.
- B. Fraction of a Space. When the calculation of the number of required parking and loading spaces results in a requirement of a fractional space, any fraction up to and including one-half ($1/2$) is disregarded, and fractions greater than one-half ($1/2$) is interpreted as one (1) whole parking or loading space.
- C. Minimum. The number of required parking spaces a site must provide.
- D. Parking Specific Metrics.
1. Square Footage
 - a. Example: 1/1,000 sf
 - b. Interpretation: 1 parking space for each 1,000 square feet of the building's floor area.
 2. Dwelling Unit
 - a. Example: 1/DU

⁴ Provide appropriate citation when other sections are complete
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- b. Interpretation: 1 parking space for each dwelling unit
- 3. Bedroom(s)/Guestroom(s)
 - a. Example: 1 + (0.75) bedrooms
 - b. Interpretation: 1 parking space plus the number of parking spaces from calculating 0.75 times all bedrooms.
- 4. Bedroom Unit
 - a. Example: 1/1 BRU
 - b. Interpretation: 1 parking space for a 1 bedroom apartment unit.
- 5. Acres
 - a. Example: 1/5 acres.
 - b. Interpretation: 1 parking space for every 5 acres.

5.05.5 Additional Rules for Computing Parking Requirements.

- A. Uses Not Listed. The Director shall have the authority to determine the required parking and loading facilities for uses not specifically listed in the tables established in this Section. This determination by the Director is in writing and is appealable to the Planning Commission.
- B. Accessory Uses. Areas accessory to the principal use of a building, or portion of a building, are to be included in the calculation of floor area of the principal use, unless noted otherwise.
- C. Alterations, Expansions, and Changes in Use. For alterations, expansions, or changes in uses, prior to a certificate of occupancy, the Director shall determine in writing, based on information submitted by the applicant, the impact of the proposed change on the parking requirement for the building, and the adequacy of the parking provided.

5.05.6 General Parking Provisions.

- A. Adequate Parking. All zoning districts must maintain off-street parking facilities for self-propelled motor vehicles.
- B. Integrate Parking Lots with Surroundings. Parking lots do not dominate the frontage of pedestrian-oriented streets, interfere with designated pedestrian routes, or negatively impact surrounding neighborhoods. The pedestrian character of streets and buildings is maximized through continuity of buildings and landscape frontage.
- C. Landscaping. Parking lots shall be landscaped, screened, and buffered.
- D. Shared Access. Parking lots shall share access drives with adjacent property with similar land uses.
- E. Lighting. All parking areas are required to provide lighting in accordance with the lighting standards in 5.02.

5.05.7 Off-Street Parking Requirements. Off-street parking shall be provided in accordance with the minimum ratios specified in Table 5.05.7-1⁵.

Table 5.05.7-1: Minimum Parking Requirements

Table 5.05.7-1 Minimum Parking Requirements	
Use	Minimum Parking Ratio
Residential	
Manufactured Home	2/DU
Mixed-Use Dwelling	2/DU
Multi-Family Dwelling	1.5/1 BRU
	2/2 BRU
	2.5/3 BRU
Single-Family Attached Dwelling	2/DU
Single-Family Detached Dwelling	2/DU
Group Living / Lodging	
Bed and Breakfast	1 + (0.75) bedrooms
Boarding and Rooming House	0.75/guestroom
Group Home	2/1000 sf
Hotel/Motel	0.75/guestroom
Long-Term Care Facilities	2/1000 sf
Agriculture	
Agriculture	--
Greenhouse/Nursery	2/1000 sf
Stable	1/5 acres
Commercial / Office	
<i>Animal Services</i>	
Kennel	2/1000 sf
Veterinary Facilities, Large animals	2/1000 sf
Veterinary Facilities, Small animals	2/1000 sf
<i>Food</i>	

⁵ Provide appropriate citation when other sections are complete
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Brew Pub, Distillery Pub, or Limited Winery	4/1000 sf
Food Catering	2/1000 sf
Grocery Store	4/1000 sf
Open-Air Farmers' Market	5/acre
Restaurant, Fast Food	5/1000 sf
Restaurant, Fast Food with Drive-Thru	5/1000 sf
Restaurant, Sit-down	6/1000 sf
<i>Entertainment / Recreation</i>	
Adult Entertainment Establishments	8/1000 sf
Art Studio	2/1000 sf
Bar/Tavern	4/1000 sf
Club/Lodge	3/1000 sf
Entertainment Facility	5/1000 sf
Golf Course	2/acre
Nightclub	4/1000 sf
Recreational Entertainment, Indoor	5/1000 sf
Recreational Entertainment, Outdoor	5/acre
Tourist Facilities	2/1000 sf
<i>Retail Sales / Personal Services</i>	
Building and Landscaping Materials Supply	2/1000 sf
Child Care Center	2/1000 sf
Convenience Store	4/1000 sf
Convenience Store with fuel sales	4/1000 sf
Financial Institution	2/1000 sf
Health and Membership Club	4/1000 sf
Pawn Shop	4/1000 sf
Personal Services	3/1000 sf
Print Shop	2/1000 sf
Retail Store	4/1000 sf
<i>Office</i>	
Professional Office	2/1000 sf

<i>Automotive</i>	
Car Wash	1/stall
Heavy Equipment Sales and Rental	2/1000 sf
Motor Vehicle Dealership	2/1000 sf
Motor Vehicle Repair, Heavy	2/1000 sf
Motor Vehicle Repair, Light	2/1000 sf
Motor Vehicle Storage	1/1000 sf
Service Station	2/1000 sf
<i>Marijuana⁶</i>	
Medical Marijuana Store	4/1000 sf
Retail Marijuana Store	4/1000 sf
Industrial / Natural Resources	
Brewery, Distillery, or Winery	4/1000 sf
Commercial Dry Cleaning Facility	1/1000 sf
Contractor and Contractor Storage	1/1000 sf
Industrial and Manufacturing, Heavy	1/1000 sf
Industrial and Manufacturing, Light	1/1000 sf
Mini-Storage Facility	1/1000 sf
Research and Development	1/1000 sf
Resource Extraction	1/5 acres
Wholesale Distribution, Warehousing, and Storage	1/1000 sf
Workshop	1/1000 sf
Institutional / Civic / Public	
<i>Death Care Services</i>	
Cemetery	4/acre
Funeral Services	2/1000 sf
<i>Education</i>	
College	3/1000 sf
School	2/1000 sf

⁶ Rely on staff to determine the appropriate zoning district allowance.

Technical School	4/1000 sf
<i>Assembly</i>	
Community Facility	6/1000 sf
Religious Land Use	5/1000 sf
<i>Government / Non-Profit</i>	
Civic Space	--
Public Facilities	1/1000 sf
<i>Medical</i>	
Medical Care Facility	4/1000 sf
Medical Office	4/1000 sf
Infrastructure	
<i>Transportation / Parking</i>	
Airport	1/acre
Off-Street Parking Facility	--
Transit Facilities	--
<i>Communications</i>	
Communication Facility	--
Wireless Telecommunications Facility	--
<i>Waste-Related</i>	
Recycling Facility	1/1000 sf
Salvage Yard	1/1000 sf
Solid Waste Facility	1/1000 sf
Accessory Uses	
Accessory Building	--
Accessory Dwelling Unit	1/DU
Accessory Use	--
Home Occupation	1/DU

5.05.8 Adjustments and Reductions to Parking Requirements⁷.

⁷ Included additional reductions that are common best practices. If these methods are too aggressive, we can scale it back.

- A. Procedure. In specific instances established in Paragraphs B – E below, the Director may approve a reduction in required parking spaces. Applications for a reduction includes the following information:
1. A parking demand analysis which substantiates the need for a reduced number of spaces.
 2. A plan showing how the parking spaces are provided on the site.
- B. Shared Off-Street Parking. Shared parking allows parking spaces to be shared among two or more uses that typically experience peak parking demands at different times and is located on the same lot or on nearby lots. Because parking spaces are shared, the total number of parking spaces that would otherwise be required may be reduced. In addition to all other applicable requirements of this Section, the following requirements apply to shared parking:
1. Authority to Reduce Parking. The Director may reduce the total minimum number of required parking spaces, provided that each use participating in the shared parking experiences peak parking demands at different times. The Director shall base this decision on the circumstances of the application.
 2. Parking Study. The Director may require the applicant to submit a parking study to determine the peak parking demand periods or other information needed to determine the viability of shared parking.
 3. Maximum Reduction. The total number of parking spaces required for all uses participating in shared parking shall not be reduced by more than 20%.
- C. Captive Market. Parking requirements for retail and restaurant uses may be reduced where it can be determined that some portion of the patronage of these businesses comes from other uses (i.e., employees of area offices patronizing restaurants) located within the same building or a maximum walking distance of five hundred (500) feet.
- D. On-Street Parking.
1. Generally. On-street parking consists of parking spaces located in a public or private right-of-way. Each parking space that is in a public or private right-of-way abutting the lot may count as required parking space for the purpose of meeting the requirements in XXX⁸. Each parking space must be on a paved area abutting the street.
 2. Credit for On-Street Parking. The Director may allow on-street parking spaces, located within five hundred (500) feet of the subject principal use, to be credited to meet the off-street parking spaces for a particular development required by XXX⁹. The site plan must identify the on-street parking credit.

⁸ Provide appropriate citation when other sections are complete

⁹ Provide appropriate citation when other sections are complete

- E. Availability of Public Parking. Parking requirements may be reduced if a property has available to it a sufficient supply of existing underutilized public parking spaces in both off-street public parking lots and/or on-street public parking spaces, and where the applicant adequately demonstrates that availability will continue in the future.

5.05.9 Cleveland Avenue Parking.

- A. For all new commercial uses located on Cleveland Avenue bounded by Sixth Street on the east, the alley between Cleveland and Harrison Avenues on the north or a projection of those easements east and west of those points, First Street on the west, and the alley between Cleveland and McKinley Avenues on the south or a projection of that easement east and west of those points, parking is required from the east property line to the west property line along the rear setback.
- B. The rear setback is a minimum of twenty-five (25) feet. (Ord. 11-2007 §1)

5.05.10 Downtown Parking¹⁰.

- A. Generally. Downtowns require innovative approaches that provide sufficient parking accommodations while maintaining the area's charm and character. This Section provides alternative parking regulatory options to retain the Town's downtown vibrancy. These options may be used to provide relief against the required parking ratios established in XXX¹¹.
- B. Applicability. These regulatory options only apply to properties within Downtown.
- C. Parking Ratio Reduction. Any property may apply a 20% reduction to the required ratio established in XXX¹².
- D. Special Parking Plan. Any nonresidential development (including multi-family dwellings) exceeding 10,000 square feet may use a Special Parking Plan (SPP) to reduce parking rates. An SPP is a parking study that shows parking demand to reduce single-vehicle occupancy transportation by incorporating alternative transportation modes, flex peak times, and promoting pedestrian activity.
 - 1. Requirements. An SPP complies with the principles of the Wellington 2021 Comprehensive Plan.
 - a. A qualified professional with demonstrated experience in transportation planning, traffic engineering, or comparable field must prepare the SPP.
 - b. An SPP must determine:
 - i. The anticipated travel demand for the development.

¹⁰ A Downtown parking section aimed to provide better parking methods. This section can be omitted if there is no appetite for these types of regulations.

¹¹ Provide appropriate citation when other sections are complete

¹² Provide appropriate citation when other sections are complete

- ii. How the anticipated travel demand for the development will be met on-site or off-site, including:
 - (a) Number of on-street parking spaces, off-street parking spaces, or shared parking arrangements.
 - (b) Number of bicycle parking spaces.
 - (c) Accommodations for pedestrians, cyclists, motorists, transit riders, and the mobility impaired.
 - iii. The strategies that will be used to reduce single-occupancy vehicle trips, reduce vehicle miles traveled by site users, and promote transportation alternatives such as walking, bicycling, ridesharing, and transit.
 - iv. Clearly defined objectives sought from implementation of the SPP.
2. Strategies. SPP strategies include the following:
- a. Walking, cycling, ridesharing, and transit promotion and education.
 - b. Shared parking arrangements.
 - c. Enhanced bicycle parking and services.
 - d. Carpooling benefits.
 - e. Free or subsidized transit passes, shuttles, or enhanced transit facilities.
 - f. Provisions for alternative work schedules.
 - g. Roadway improvements adjacent to the site that will help encourage transportation alternatives.
3. Decision. In making a final decision, the Director must find the following:
- a. The project includes performance objectives to minimize single-occupancy vehicle trips and maximize the utilization of transportation alternatives to the extent practicable, considering the opportunities and constraints of the site and the nature of the development.
 - b. The project meets the anticipated transportation demand without adversely impacting public infrastructure, such as transit and on-street parking facilities, and the surrounding neighborhood.
- E. Design.
- 1. All off-street parking must be located on the lot being served, or on a separate lot or parcel no more than five hundred (500) feet from the primary pedestrian entrance of the building that it serves.
 - 2. Access for off-street parking shall generally be achieved by means of alleys, off-street vehicular connections between adjacent parking lots, and side streets.
 - 3. Off-street parking in the front of a nonresidential lot is not permitted.

4. On-street parking applies when available. Additionally, on-street parking must adhere to the following requirements and receive design approval by the Town:
 - a. Parallel and angled on-street parking is allowed.
 - b. On-street parking must not encompass more than 70% of the block frontage.
 - c. On-street parking must be inset into the block with street trees or plantings incorporated between groups of parking spaces.

5.05.11 ADA Parking.

- A. Generally. ADA parking spaces and related ADA accessibility features are required to be installed in accordance with the current edition of the ADA Standards for Accessible Design (the “ADA Standards”) as published by the Department of Justice. Where discrepancies exist between this Land Use Code and the ADA Standards, the ADA Standards shall apply. All required parking shall meet ADA standards.

5.05.12 Parking Design.

- A. Surface. All off-street parking areas are surfaced with poured in place concrete or asphaltic concrete. All driveway portions within street right-of-way are paved and designed to the standards of the Town Engineer.
- B. Off-Street Parking Design. Any off-street parking area must have a design so that vehicles exit without backing onto a public street. Off-street parking areas are designed so that parked vehicles do not encroach upon or extend onto public rights-of-way or sidewalks, or strike against or damage any wall, vegetation, utility or other structure.
- C. Circulation Area Design. Circulation areas must facilitate the safe movement of vehicles without posing a danger to pedestrians or impeding the function of the parking area.
- D. Location. Nonresidential off-street parking facilities are located within 500 feet of the building measured from the nearest point of the building or structure.
- E. Parking Space Dimensions¹³. Parking spaces must meet the following standards prescribed in XXX¹⁴. All dimensions represent the minimum requirement for any required parking space.

Table XX: Parking Space Dimensions

Parking Space Dimensions					
Parking Angle	Parking Space Width	Parking Space Depth	Aisle Width	Curb Length	Overhang
45°	9 ft	18 ft	13 ft	14 ft 4 in	1 ft 5 in
60°	9 ft	18 ft	13 ft	11 ft 6 in	1 ft 8 in

¹³ Create new graphics or update current graphics

¹⁴ Provide appropriate citation when other sections are complete

Parking Space Dimensions					
90°	9 ft	18 ft	24 ft	10 ft	2 ft
0° (Parallel)	8 ft	22 ft	20 ft	24 ft	0 ft

5.05.13 **Bicycle Parking.** Bicycle parking is required for all new uses to encourage the use of bicycles by providing secure and convenient places to park bicycles. These regulations ensure adequate bicycle parking by different uses.

- A. **Measurements.** Bicycle spaces are measured as the ability for a facility to store one bicycle. One bicycle space equals one stored bicycle.
- B. **Minimum Requirements.** Bicycle parking totals shall be equivalent to at least 2% of the required number of vehicle parking spaces, but in no event shall the minimum number of bicycle parking be reduced below two (2) bicycle spaces.
- C. **Standards.** These standards ensure that required bicycle parking is designed so people of all ages and abilities can access bicycle parking and securely lock their bicycle without inconvenience.

1. **Bicycle Parking Facility Types.**

- a. **U-Rack.** A “U-shaped” bicycle facility affixed to pavement that stores up to two (2) bicycles which are locked from the outside.
- b. **Bollard Rack.** A bicycle facility affixed to pavement that stores up to two (2) bicycles which are locked from the outside.
- c. **Grid Rack.** A dual sided bicycle facility affixed to pavement that stores multiple (2 to 20) bicycles which are locked from the outside.
- d. **Low Profile Rack.** A low-lying bicycle facility affixed to pavement that stores multiple bicycles which are locked from the outside.
- e. **Bicycle Locker.** In the shape of an upside-down “U”, staple, or logo, this rack provides two points of ground contact and two points of contact for supporting a bicycle.
- f. **Secure Parking Area.** A weather-protected, standalone bicycle parking structure or building extension with shared racks and access control.

2. **Dimensions and Bicycle Racks.**

- a. **Parking Space and Aisle Dimensions.**
 - i. Each horizontal parking space (a space provided parallel to the ground) must have a minimum length of 72 inches, a minimum width of 18 inches, and a minimum height of 84 inches. If a U or similar rack is provided, one rack may serve two bicycles if it is installed so that it provides the minimum parking space dimensions on each side.

- ii. A bicycle parking facility must have an access aisle that is a minimum of 72 inches on at least one side of a row of parked bicycles.
 - b. Bicycle Racks. A bicycle rack must:
 - i. Allow a bicycle frame and one wheel to be locked to the rack with a high-security lock;
 - ii. Allow a bicycle to be securely held with its frame supported in at least one place;
 - iii. Be durable and securely anchored;
 - iv. Have a locking surface thin enough to allow standard U-locks to be used, but thick enough so the rack cannot be cut with bolt cutter; and
 - v. Not include any elements within the interior space.
- 3. Location, Access, and Security. Bicycle parking is in publicly accessible, highly visible locations that serve the primary entrance of a building. Parking is visible to pedestrians and bicyclists on the street and is intended for building and site visitors.
 - a. Each space must be:
 - i. Available to the public;
 - ii. Located in a convenient, well-lit area that is clearly visible to both a visitor to the building and a person who is on the sidewalk that accesses the building's primary entrance;
 - iii. Within 150 feet of:
 - (a) the primary entrance of each building within the development, and closer than the nearest non-accessible vehicle parking space; or
 - (b) at least one primary entrance of a building with more than one primary entrance; unless the applicable deciding body approves an alternative location during the site plan process; and
 - iv. Outfitted with a rack to which a bicycle can be locked.
 - b. Each parking facility is prohibited from obstructing pedestrian traffic or interfering with the use of the pedestrian area.
 - c. Any sidewalk rack that is:
 - i. Parallel to the curb must be located so that the nearest vertical component of the rack is a minimum of 24 inches from the curb face and 26 inches from the building face;
 - ii. Perpendicular to the curb must be located so that the nearest vertical component of the rack is a minimum of 48 inches from the curb face and 42 inches from the building face;

iii. Diagonal to the curb must be located so that the nearest vertical component of the rack is a minimum of 48 inches from the curb face, and 42 inches from the building face, measured in a line parallel to the orientation of the rack.

d. Each sidewalk rack must be a minimum of 10 feet from any standalone fire hydrant.

e. Each parked bicycle must be accessible without moving another bicycle.

5.05.14 Excess Weight and Recreational Vehicle Parking¹⁵.

A. Boats, boat trailers, tractors, trailers, motor homes, buses, detached/dismounted campers and excess-weight vehicles are not parked or kept on private property for longer than seventy-two (72) consecutive hours within any one month period, unless otherwise stated in this Subsection¹⁶.

B. Boats, boat trailers, tractors, trailers, motor homes, buses, detached/dismounted campers and excess-weight vehicles may be parked upon a public right-of-way or roadway adjacent to the owner's property, for a maximum total of forty-eight (48) consecutive hours in any one month period.

C. All boats, boat trailers, trailers, motor homes, buses, detached/dismounted campers and excess-weight vehicles kept or stored on private residential property for longer than seventy-two (72) consecutive hours during any one month period are kept or stored in a rear yard or interior side yard behind the front yard setback, or within an enclosed building, unless otherwise stated in this Subsection.

D. Despite the forgoing provisions of this Subsection, parking of excess weight vehicles in public areas, including streets, is allowed in the following areas where reinforced streets or pads have been constructed.

1. The west side of First Street from Cleveland Avenue to a point two hundred (200) feet north of Kennedy Avenue.

5.05.15 Loading¹⁷.

A. Generally. The required number of off-street loading spaces are determined by gross floor area. Outdoor storage, sales, or display areas must be added to gross floor area if these areas contain materials that are received or distributed by trucks. If a development has more than two uses, the off-street loading space requirement is the highest number of spaces required by any one use. Required loading spaces follow the standards prescribed in Table XXX¹⁸.

¹⁵ Some of this language may be removed – subject to changes

¹⁶ Cross reference to the header of this subsection

¹⁷ Updated loading section with clearer standards

¹⁸ Provide appropriate citation when other sections are completed

Table XX: Required Loading

Required Loading	
Floor Area Square Footage	Minimum Required Number of Spaces
0 – 10,000 sf	1
10,001 – 50,000	2
50,001 – 75,000	3
75,001 – 100,000	4
100,000 +	4 plus 1 for every 50,000 sf after 100,000 sf

B. Standards.

1. Location. A loading space:
 - a. Must be located within the same development as the building or use served;
 - b. Is prohibited from projecting into a sidewalk, street, or public right-of-way;
 - c. Is prohibited from being located between the front building line and the lot line; and
 - d. Is placed to the rear or side of buildings in visually unobtrusive locations.
2. Dimensions. The size of delivery vehicles intending to serve the site, determine loading space size. The minimum loading space size is:
 - a. 10 feet wide, 30 feet long, and 14 feet high if serving single-unit trucks and similar delivery vehicles; and
 - b. 12 feet wide, 55 feet long, and 15 feet high if serving larger freight vehicles.
3. Maneuvering. The size of delivery vehicles intending to serve the site, determine maneuvering area size. Each maneuvering area for loading spaces must not conflict with parking spaces or with the maneuvering areas for spaces. A maneuvering area must be located on site and be a minimum of:
 - a. 35 feet for spaces serving single-unit trucks and similar delivery vehicles; and
 - b. 50 feet for spaces serving larger freight vehicles.
4. Design. Each loading space must minimize conflicts with other vehicular, bicycle, and pedestrian traffic.
 - a. Loading facilities must maintain a 50-foot minimum distance from any residential property unless completely enclosed by building walls, or a uniformly solid wall, or any combination of the two.
 - b. Screening and landscaping prescribed in Section 5.04 apply to loading facilities and shall prevent direct views of the loading facilities and their driveways from adjacent properties and public right-of-way.

5.06 Parks and Open Space

5.06.1 Purpose. The purpose of this section is to ensure that a comprehensive, integrated network of parks and open space is developed and preserved as the community grows, the Town shall maintain a Park Plan affording varying types of public and private park settings for Town residents' uses. (Ord. 11-2007 §1)

5.06.2 Types of parks and open space.

- A. *Plazas*. A plaza is typically located in a commercial or industrial area bordered by civic or private buildings to serve as a public gathering place. Plazas may range from very active places with adjacent complimentary uses, such as restaurants and cafes, to quiet areas with only seating, formal landscape plantings and amenities, such as fountains or public art. Developers are responsible for developing and providing the appropriate amenities for each plaza.
- B. *Pocket parks*. Pocket parks are public open spaces provided by the developer and maintained by the development or associated homeowner's associate. They are integrated into the overall neighborhood design and can either serve as a neighborhood gathering space such as a pool and/or clubhouse, or be comprised of more public space such as a landscaped seating area, children's play area, contemplative garden area, or similar outdoor recreation opportunities for the neighborhood.
- C. *Neighborhood parks*. Neighborhood parks are comprised of open space land provided by the developer to be developed and maintained by the Town for recreation and social gathering. These parks can include multi-use play areas, picnic areas, playground equipment, court game facilities and community gardens.
- D. *Community parks*. Community parks are comprised of land purchased and developed by the Town with Park Impact fees to serve the residents of several neighborhoods. Community parks are to be located on or near arterial streets at the edge of residential areas or in nonresidential areas to minimize the impact of organized recreational activities, such as lighted ball fields.
- E. *Trails*. Trail systems shall link neighborhoods, parks, schools, open spaces, employment centers, community facilities and neighboring communities and thus provide important transportation connections as well as recreational opportunities and access. Developers must provide trails in all areas designated "Parks and Trails" on the Comprehensive Public Facilities Map or the Parks and Recreation Master Plan, as well as provide connections to the Town's existing trail system and destinations within the neighborhood.
- F. *Storm drainage facilities*. Storm drainage facilities, including stormwater detention and stormwater retention ponds, can be counted toward the required open space dedication but cannot be counted toward park dedication requirements. Storm drainage facilities shall be

owned and maintained by the development or associated homeowner's association in a tract separate from any Park land that is dedicated to the Town.

5.06.3 General provisions.

- A. All parks and open space shall be designed and located per the Town of Wellington Parks and Recreation Master Plan.
- B. *Open space should serve as the neighborhood focus.* Open space, shall be integrated into the overall neighborhood design and used to organize and focus lot, block and circulation patterns and to enhance surrounding development. Street, block, lot and building patterns shall respond to the views, landscape and recreational opportunities provided by the open space.
- C. *Public access.* Areas designated as public open space shall be both visibly and physically accessible to the community. Public access shall be provided to all public open space, natural and developed, directly from the public street and trail system. Open space areas, except for pocket parks and plazas, shall be bounded along at least twenty percent (20%) of the perimeter by a street.
- D. *Buildings shall front public open space.* Development adjacent to open spaces shall front onto the area as much as possible, so that the areas are not enclosed by back yards.
- E. *Open space uses.* Uses designated within the open space shall be appropriate to the context and character of the site and the intensity of the proposed development.
- F. Environmentally sensitive, archeological and historic resources may be dedicated to the Town and maintained by the Town if approved by the Board of Trustees.
- G. Stormwater detention and retention areas that function as open space shall be owned and maintained by a homeowners' association or the landowner.
- H. Areas designated as open space shall be maintained according to the designated function of the area. If the area is to remain in private ownership, a mechanism which will assure maintenance will be funded in perpetuity must be in place at the time of final plat.
- I. *Open space protection.* Areas designated as open space shall be dedicated or conveyed to the Town or protected by a deed restriction, conservation easement or other appropriate method to ensure that they cannot be subdivided or developed in the future and that such areas shall remain as open space in perpetuity. Uses of open space may include recreational or agricultural activities. (Ord. 11-2007 §1)

5.06.4 Open space requirements.

- A. *Open space includes:*

1. Areas within the community designated for the common use of the residents of an individual development or the community at large;
 2. Areas designated for preservation and protection of environmental resources, including floodplains, natural drainage ways and wetland areas;
 3. Areas designated for agricultural preservation; and
 4. Areas of archeological and historic significance.
- B. *Non-open space.* Open space shall not include the following:
1. Required setback areas around oil and gas production facilities;
 2. Disconnected remnants of land created by division of sites into lots or parcels that do not qualify as functional open space, unless approved by the Board of Trustees;
 3. Private yards;
 4. Tree areas within a street right-of-way; or
 5. Required parking lot landscaping associated with all uses, except parking specifically designated for access to open space areas and within commercial or industrial projects.
- C. *Amount of open space required.* The amount of functional open space required in each development will be based on the density of the development, the recreational requirements of the anticipated users and the anticipated opportunities for public recreation within walking distance of the site (one-quarter [$\frac{1}{4}$] mile). All development within the Town shall meet the following open space requirements:
- D. *Single-family subdivisions and multi-family residential developments.* Open space for single-family residential development that requires a major subdivision per section 2.17 and multi-family developments shall include, at a minimum:
1. Twenty percent (20%) of the gross land as functional open space to include:
 - a. One (1) centrally located pocket park for every two hundred (200) residential units;
 - b. The land for one (1) neighborhood park within one-quarter ($\frac{1}{4}$) mile radius of the proposed homes or a fair-share, cash-in-lieu contribution for the cost of the neighborhood park that will serve the development; and
 - c. An internal trail system, taking into account trails designated in the Comprehensive Plan and the Parks and Recreation Master Plan.
- E. *Open space and plans.* All land development applications, with the exception of plot plan applications for individual single-family residences, shall be accompanied by the appropriate open space plan. The open space plan shall be included with the landscape plans or submitted as a separate map based on direction from the Director. (Ord. 11-2007 §1)

5.06.5 Fee in lieu of dedication.

- A. A developer of property may, with approval by the Board of Trustees, pay fee-in-lieu of park dedication in those cases where dedication of land is not feasible or not desired by the Town. Such payment shall be based on the fair market value of the developed property that otherwise would have been required to be dedicated as park space, to be determined after completion of the platting process. Such payment shall be held by the Board of Trustees for the acquisition of open space sites and land areas by the Town. At the option of the Board of Trustees, a developer may meet open space dedication requirements through a combination of payment of fee-in-lieu of land dedication, impact fees and land dedication. (Ord. 11-2007 §1)

5.06.6 Fair contribution for public school sites. All development shall dedicate or convey land for public school purposes to the Poudre School District, or make payment in lieu of land dedication or conveyance in accordance with the intergovernmental agreement between the Town and the Poudre School District. (Ord. 11-2007 §1)

5.07 Refuse/Trash Disposal

5.07.1 Purpose. The purpose of this Section is to provide adequate provisions for on-site waste disposal and collection.

5.07.2 Applicability. This Section applies to all nonresidential development within Town limits. All refuse/trash disposal installed after the effective date of this Land Use Code complies with this Section.

5.07.3 Standards.

- A. Generally. A site shall provide refuse/trash disposal that is:
1. Located to facilitate collection and minimize negative impacts, including to site occupants, neighboring properties, and public rights-of-way; and
 2. Constructed to allow for collection without damage to the development site or the collection vehicle.
- B. Screening and Visibility. All refuse/trash disposal requires screening to prevent them from being visible to:
1. Persons located within any dwelling unit on residential property other than that where the refuse/trash disposal is located;
 2. Occupants, customers, or other invitees located within any building on nonresidential property other than that where the refuse/trash disposal is located; and
 3. Persons traveling on any public street, sidewalk, or other public way. (Ord. 11-2007 §1)

- C. Design. Screening design shall compliment the materials, colors, and features of the primary building.

5.08 Signs

5.08.1 Purpose and Findings.¹⁹ The purposes of this Section are to:

- A. Provide a comprehensive and balanced system to regulate signs by physical dimension and placement throughout the Town.
- B. Protect state and federal constitutional rights to free speech by:
 - 1. Providing ample opportunities for expression through signs;
 - 2. Providing content-neutral regulations of signs; and
 - 3. Providing clear standards for approval of signs.
- C. Protect public health, safety, and welfare by:
 - 1. Minimizing visual traffic hazards, distractions, and obstructions for motorists, cyclists, and pedestrians;
 - 2. Preventing signs that could confuse motorists because the signs resemble traffic control signs;
 - 3. Reducing hazards caused by signs that overhang or project over the public right-of-way;
 - 4. Encouraging sign users to upgrade, update, or remove poorly maintained and nonconforming signs;
 - 5. Preventing signs that are potentially dangerous due to structural deficiencies and disrepair; and
 - 6. Preventing visual clutter or deterioration of the community's appearance and attractiveness that would promote blight.
- D. Promote the Town's appearance, character, quality, and business climate by:
 - 1. Encouraging attractive and functional signs;
 - 2. Encouraging signs that harmonize with the sign's site and buildings and with surrounding buildings and developments; and
 - 3. Provide sign standards that will promote a vibrant and attractive Downtown Core.
- E. Implement the goals and policies of the Comprehensive Plan by establishing uniform standards and procedures to regulate the size, type, number, design, placement, illumination, timeframe for display, and maintenance of signs.

5.08.2 Applicability.

- A. Generally.

¹⁹ This Section expands and updates the current purpose statement in §16-14-10. Purpose.
Chapter 5 | January 31, 2022

1. This Section applies to applications for sign permits and to new and existing signs within the Town of Wellington.
 2. Permits Required for Certain Signs.²⁰ This Section requires sign permit approval before a person may construct, install, operate, display, or otherwise use any sign as specified in the applicable paragraph for each sign type governed by this Section. Repairs, changes of parts, and preventive maintenance of signs do not require a sign permit.
 3. Prohibited Signs. A person shall not construct, install, operate, display, or otherwise use any sign in a time, place, or manner that this Section prohibits.
 4. This Section does not prohibit signs required by state or federal law and does not authorize signs prohibited by state or federal law.
 5. Other Requirements Apply. This Section does not supersede the requirements of other regulations of the Municipal Code of the Town of Wellington. A sign permit does not satisfy the requirement for a building permit under Chapter 18: Building Regulations. An applicant must obtain all necessary permits for the construction and installation of a sign.
- B. Exemptions.²¹
1. Signs No Larger than One Square Foot.²² This Section does not apply to signs that do not exceed one square foot in area.
 2. Flags. This Section does not apply to flags.
 3. Merchandise. This Section does not apply to merchandise available for purchase if visible through a window or in a window display.
 4. Indoor Signs. This Section does not apply to the placement of a sign inside a structure not visible from any point outside the structure (for example, inside a shopping center mall). For indoor signs, "visible" includes any sign displayed within three feet of a window or other transparent opening and oriented to the window so that a person outside of the building could see the sign.
 5. Signs not Visible Off-Site. This Section does not apply to signs not visible off-site. A sign is considered not visible where it is fully obstructed by natural changes in grade, buildings, or

²⁰ This subparagraph replaces the previous requirement for sign approval during site plan review from §16-14-40 with a new sign permit as recommended in the Codes Assessment Sign Code Recommendation 3: "Develop application process for a sign permit."

²¹ This subparagraph carries forward the current exemptions for flags (§16-14-20), merchandise and window displays (§16-14-20), scoreboards (§16-14-20), address numerals (§16-14-30(b)(2)), and legal notices (§16-14-30(b)(3)) with changes to conform with principles of content neutrality. It also adds new exemptions specifically focused on simplifying content-neutral regulation, such as indoor signs and signs not visible off-site. It also adds exemptions for government signs, required signs, or official traffic control devices.

²² This subparagraph carries forward the current exemption for house numerals in §16-14-30(b)(2) with removal of content. The new content-neutral exemption would also apply to many commonly available signs providing legal notices (such as "no trespassing," "beware of dog," etc.) currently exempted by §16-14-30(b)(3).

landscaping that provides a complete year-round visual barrier. "Fully obstructed" means that the signs are not visible at ground level from the edge of the public right-of-way or the property line for an adjacent residential property line.

6. Government Signs. ²³ This Section does not apply to signs erected, maintained, or displayed by the State, Federal, County, or Town government and the Poudre School District. Government uses in all zoning districts may include signs.
7. Required Signs. This Section does not apply to any sign or device the State, Federal, County, or Town government requires a person to erect, maintain, or display.
8. Traffic Control Devices. This Section does not apply to traffic control devices on private or public property the Manual on Uniform Traffic Control Devices adopted in this State requires.

5.08.3 Prohibited Signs.²⁴ A person shall not construct, install, operate, display, or use the following types of signs:

- A. Flashing signs;
- B. Search Lights;
- C. Signs that feature motion;
- D. Balloon signs and inflatable signs;
- E. Billboards;²⁵
- F. Pole Signs;
- G. Signs attached to a tree ,utility pole, fence or wall other than a building wall;
- H. Signs placed on vehicles or trailers which are parked or located for the primary purpose of displaying said sign.
- I. Obsolete Signs.
- J. Electronic Message Signs on moving vehicles.
- K. Signs which employ sound projecting devices or audio content.
- L. Signs in the right-of-way of any public street or road; and

²³ This subparagraph applies broadly to exempt all government signs from the controls of this Section. This or a similar regulation is necessary to allow scoreboards on athletic fields as currently allowed in §16-14-20. This approach will apply to government owned or operated fields. Frequently, local governments prefer to exempt government signs because government buildings and schools may include sign features, such as digital message boards, that are otherwise not allowed in the district. The exemption also allows government signs in the right-of-way as currently allowed in 16-14-50(d).

²⁴ This subsection re-frames current prohibitions on flashing signs and signs that move (§16-14-50(b)), signs attached to a tree or utility pole (§16-14-50(c)), and signs in the right-of-way (§16-14-50(d)).

²⁵ The subsection adds a prohibition of billboards for clarity. It does not appear that Wellington currently has any billboards, and the existing regulations would not allow a sign of that size. The prohibition of billboards can be removed if this is not preferred. The current sign code provides for off-premises signs as a conditional use in §16-14-50(f). That provision was not carried forward but can be included if that approach is preferred.

M. Any other sign not permitted under this Section.

5.08.4 General Requirements

A. Sign Features.²⁶

1. Lighting. Externally lighted signs must have shielding to prevent the lights from shining directly onto adjacent properties or into the line of vision of the drivers and pedestrians on adjacent roads or sidewalks.
2. Manual Reader Boards.
 - a. Signs may include manual reader boards as indicated in the sign standards for each district. Signs in residential developments may not include reader boards.
 - b. The sign standards express the maximum portion of the sign face area that may consist of a reader board as a percentage.
3. Electronic Reader Boards.
 - a. Signs may feature electronic reader boards as indicated in the sign standards for each district. Signs in residential developments may not include electronic reader boards.
 - b. The sign standards express the maximum portion of the sign face area that may consist of a reader board as a percentage.
 - c. The message must not change more frequently than once per minute.
 - d. The message itself and the transition to a new message must not include scrolling, animation, zoom, fade, dissolve, exploding, or any other simulation of movement.
 - e. Electronic reader boards must consist of a black or similar dark background.
 - f. Electronic reader boards must have ambient light monitors to automatically adjust the brightness of the sign so that it does not exceed 5,000 nits during daylight hours and 500 nits from dusk to dawn.
 - g. A sign user may not display an electronic reader board within 150 feet of a residential property.

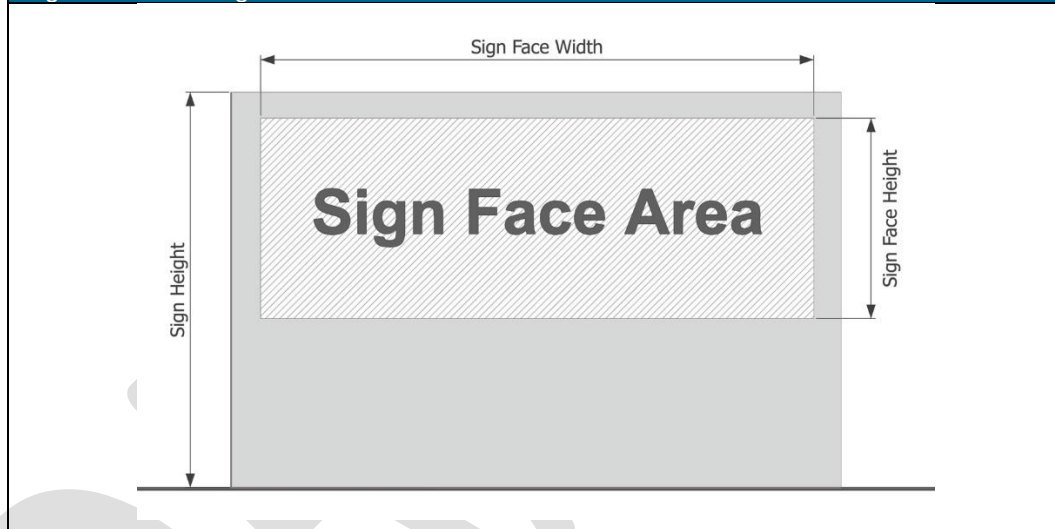
B. Clearance. A sign user shall not install a projecting sign, awning sign, canopy sign, or any other sign extending over a sidewalk or driveway that is less than nine (9) feet above grade.

C. Setbacks. Signs may encroach on required bufferyards and setbacks provided by this Chapter. However, all signs must comply with the sign setback if provided for the sign types in this Section.

D. Measurements.

²⁶ This subsection carries forward the requirement for shielding of lights and adds regulations for manual and electronic reader boards. Wellington appears to have many signs with reader boards, primarily for gas stations. Under the proposed subsection, reader boards are allowed in commercial districts in a content-neutral manner for all uses.

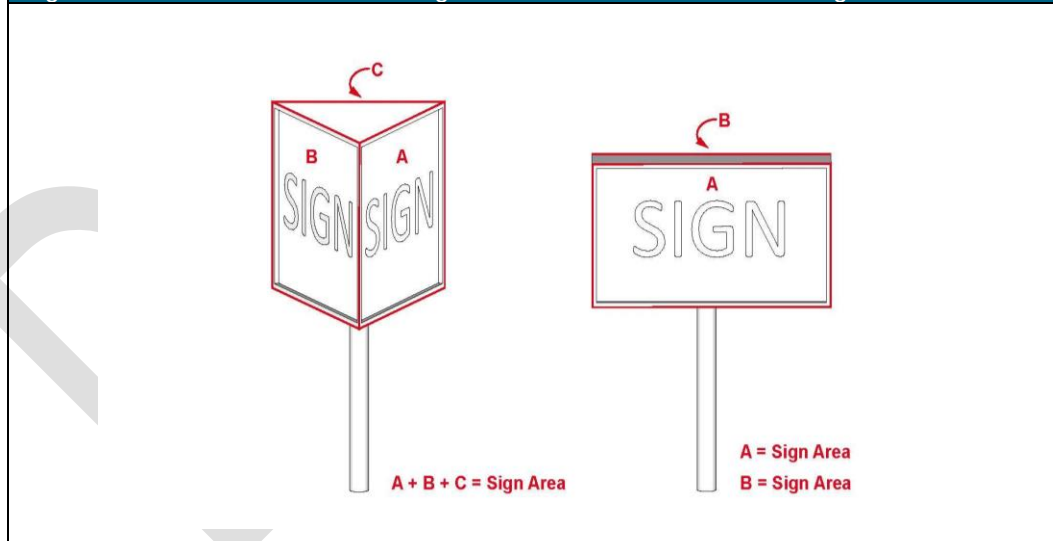
Figure 5.08.4-1 Sign Measurement



1. Height of sign. For freestanding signs, height is the distance from the highest point of the sign to the base of the sign at the ground level. Figure 5.08.4-1: *Sign Measurements* illustrates this measurement. This Section defines a maximum sign height for sign types.
2. Sign Face Area.
 - a. The sign face area, measured in square feet ("sf."), is the width multiplied by the height of a single rectangle, parallel with the ground, that contains all sign copy, decorative embellishments, and internally illuminated or backlit panels, fabric, or similar material that is not an architectural design element of the building. Figure 5.08.4-1: *Sign Measurements* illustrates this measurement.
 - b. For freestanding signs, sign area includes cabinets, background panels, or colors but does not include building architecture or the sign support or base.

- c. The sign face area for an irregularly shaped sign is the sum of separate rectangles that each contain a portion of the sign elements.
- d. For wall signs, sign face area for a single sign includes all related sign elements on the same exterior wall or structure. Related sign elements have similar construction and are no more than five feet apart, measured horizontally or vertically.
- e. Multi-Faced Signs. Figure 5.08.4-1. *Measurement of Sign Face Area for Multi-Faced Signs* illustrates sign face area measurements for multi-faced signs.
 - i. If the faces of a multi-faced sign have the same area, have an interior angle of less than 45 degrees, and are not more than 18 inches apart, then the sign face area is the area of one face of the sign.
 - ii. Where the faces of a multi-faced sign are not the same size, the interior angle formed by the faces is less than 45 degrees, and the faces are not more than 18 inches apart, the sign face area is the area of the larger sign face.
 - iii. If the interior angle formed by the faces of a multi-faced sign is more than 45 degrees, or if the faces are more than 18 inches apart, then the sign face area is the cumulative area of all sides of the sign.

Figure 5.08.4-2 Measurement of Sign Face Area for Multi-Faceted Signs



- E. Message Substitution. For any sign authorized or permitted, a noncommercial message may be substituted for any allowed commercial message or any allowed noncommercial message, provided that the sign is otherwise legal. The purpose of this provision is to prevent inadvertent favoring of commercial speech over noncommercial speech, or favoring of any particular noncommercial message over any other noncommercial message. This provision does not allow substitution of an on-site commercial message for an off-site commercial message.
- F. Violations.

1. The Director or designee shall make such investigations and issue notices of violation as are necessary for enforcement of the provisions of this section.
2. The issuance or granting of a permit shall not be deemed or construed to be a permit for an approval of any violation of any of the provisions of this section.
3. In addition to all other remedies for violation of this article, signs deemed to be in violation of the this Land Use Code by the Director or designee may be removed and held until they are either redeemed by their owner upon payment of a fee set by the Town or a period of 30 days expires, at which time the Town may dispose of the signs.

5.08.5 Sign Districts. This Section regulates sign characteristics by district. Many zoning districts have common characteristics for the purposes of sign regulations, and this Section combines zoning districts into common sign districts. Table 5.08.5-1: *Sign Districts* designates the zoning districts included in each sign district.

Table 5.08.5-1. Sign Districts

Sign District	Abbreviation	Zoning Districts
Rural	RUR	Agricultural District (A) Residential District, Single-Family Rural Density (R-1)
Residential	RES	Residential District, Single-Family Medium Density (R-2) Residential District, Single-Family Senior Housing (R-3) Residential District, Multi-Family (R-4) Manufactured Home Park District (MH)
Downtown/Community Commercial	DCC	Community Commercial District (C-1) Downtown Commercial District (C-2)
Commercial/Industrial	CID	Highway Commercial District (C-3) Light Industrial District (LI) Industrial District (I)

5.08.6 Primary Signs.²⁷

A. Definition. A primary sign is a permanent freestanding or attached sign that serves as the principal sign for the lot.

B. Primary Sign Types.

1. Freestanding Sign Definition. A freestanding sign is a structure, device, or object that is structurally independent of a building, anchored firmly to or below the ground surface, and that is a sign itself or is the support structure for a sign.

²⁷ The Primary Sign Standards carry forward the flexible allocation approach for freestanding and attached signs in §16-14-50(h). Separate standards for attached and freestanding signs can be added if that is preferred. Some sign dimensions have been revised to distinguish allowances by district instead of by use.

2. Attached Sign Definition. An attached sign or wall sign is a permanent, attached sign, fastened to or affixed on an exterior wall of a building or other structure so that the wall becomes the supporting structure for, or forms the background surface of, the sign.

C. Primary Sign Allowances by District.

1. A sign user may display primary signs that comply with the standards shown in Table 5.08.6-1. *Primary Sign Standards*.
2. The sign user may allocate the sign face area allowance between attached and freestanding signs, but the total area of all attached and freestanding signs may not exceed the cumulative area allocation for the district.

Table 5.08.6-1. Primary Sign Standards

Standard		RUR	RES	DCC	CID
Allowed?		Yes	Yes	Yes	Yes
Permit Required?		NR	NR	Yes	Yes
Dimensions					
Number		N/A	N/A	N/A	N/A
Height	Attached	No higher than principal building	No higher than principal building	N/A	N/A
	Freestanding	6 ft.	6 ft.	No higher than principal building	No higher than principal building
Total sign face area allowance for attached and freestanding signs		4 sf. for residential	4 sf. for residential	1 sf. per ft. of building fronting the public way not to exceed 50 sf.	1 sf. per ft. of building fronting the public way not to exceed 100 sf.
		50 sf. for NR	50 sf. for NR		
Sign Features					
Illumination		NR	NR	Yes	Yes
Manual Reader Board		No	No	50%	50%
Electronic Reader Board		No	No	No	50%
Key: Yes=sign type or characteristic allowed No=sign type or characteristic not allowed NR=requirement for non-residential uses only “—”=standard does not apply.					

D. Multitenant Developments.²⁸ Multitenant developments may display primary signs as provided in this Paragraph.

1. Freestanding Signs.

²⁸ This paragraph carries forward the multitenant sign standards, which provide for 100 sf. of face area for freestanding signs in §16-14-50(h). This paragraph also allows an attached sign for each user.

- a. A multitenant development may display one freestanding sign per frontage on a public way with a sign face area not to exceed 100 square feet and that is no taller than the height of the principal building.
 - b. Multitenant developments must comply with the general standards of Paragraph 0 regardless of the number of tenants or the number of lots in the development. Each tenant or user may not display a separate freestanding sign.
2. Attached Signs.
- a. A tenant in a multitenant development with separate entrances for each tenant may display one attached sign on the façade for that tenant's primary public entrance.
 - b. A tenant may display an attached sign no larger than one square foot of sign face area per linear foot of the façade for that tenant's primary public entrance, as measured at the foundation of the building.
- E. Subdivision Entrance Signs.²⁹ A residential subdivision may display signs as provided in Table 5.08.6-2. *Subdivision Entrance Sign Standards*.
1. Definition. A subdivision entry sign is a type of permanent freestanding sign located at the entrance to a subdivision in a residential district or a distinct phase of a subdivision in a residential district.

Table 5.08.6-3. Subdivision Entrance Sign Standards

Standard	RES
Dimensions	
Number (Maximum)	2 per entrance
Height	10 ft.
Sign face area allowance	100 sf.
Sign Features	
Illumination	Yes
Manual Reader Board	No
Electronic Reader Board	No
Key: Yes=sign type or characteristic allowed No=sign type or characteristic not allowed	

2. Location Standards. A sign user may locate subdivision entrance signs at the intersection of a public way and an entrance road or private driveway into the development or at the entrance to a separate phase of a development in a residential district. A sign user may install a subdivision entrance sign or signs with one of the following orientations:

²⁹ The Subdivision Entrance Sign Standards carry forward the allocation in §16-14-50(h) but expand the locations and configuration for these signs.

- a. Two signs with one sign face each, located on opposite sides of the entrance road or private driveway;
 - b. One sign with two faces located within a landscaped area dividing two one-way entrance roads or private driveways; or
 - c. One sign with one sign face, located on one side of the entrance road or private driveway.
- F. Painted Wall Signs in the Downtown Core and Community Commercial Districts.³⁰
- 1. Definition. A painted wall sign is a hand-produced work in which paint is applied directly on an exterior wall of a building or structure. A painted wall sign does not include:
 - a. Mechanically produced or computer-generated prints or images, including digitally printed vinyl sheets and wraps;
 - b. Works containing electrical or mechanical components; or
 - c. Works that involve changing or moving images or components.
 - 2. Location Standard. A sign user may only locate a painted wall sign on a building in the Downtown and Community Commercial Sign District on an exterior wall or structure that does not have direct street frontage, including a wall facing an alley.
 - 3. Sign Area for Painted Wall Signs. A painted wall sign may cover the full dimensions of the wall on which it is located.
 - 4. Sign Permit. A sign user must apply for a sign permit to display a painted wall sign. The Building and Planning Department will review an application based on the following factors:
 - a. The sign uses durable, exterior grade paints and materials and weatherproof and ultraviolet-protective coatings;
 - b. The sign uses colors that coordinate with the colors of the building;
 - c. The sign is directed at and scaled to pedestrians;
 - d. The sign does not overwhelm or hide character-defining features of a building;
 - e. The sign is placed and sized to reinforce the building's architecture and its surroundings; and
 - f. The sign is placed at the same height and similar façade locations as adjacent tenants, if possible, to provide an integrated block appearance.

³⁰ This expanded section provides a content-neutral allowance for murals, which are currently allowed by the exception in §16-14-20 for “works of art which in no way identify a product.” It appears that murals are located exclusively in the Downtown District, and they can be limited to that zoning district if they are not preferred in the Transitional and Community Commercial Districts. This section facilitates 2021 Comprehensive Plan strategies DT. 1.8 (Enhance alleys [with art, seating, plantings, pathways, lights, paving, etc.] to contribute to improving community/social gathering spaces in Downtown. Identify opportunities for the community to be a part of beautification efforts) and DT. 1.9 (Continue the support of a variety of public art within Downtown).

G. Window signs.³¹

1. Definition. A temporary or permanent sign posted, painted, placed, or affixed to a window or glass door.
2. Location. A sign user may display window signs on a window or door in any district without a permit.
3. Sign Area. Window signs shall not cover more than 50% of the area of the window on which they are located. The window sign area will not count against the overall allowance for attached and freestanding signs.

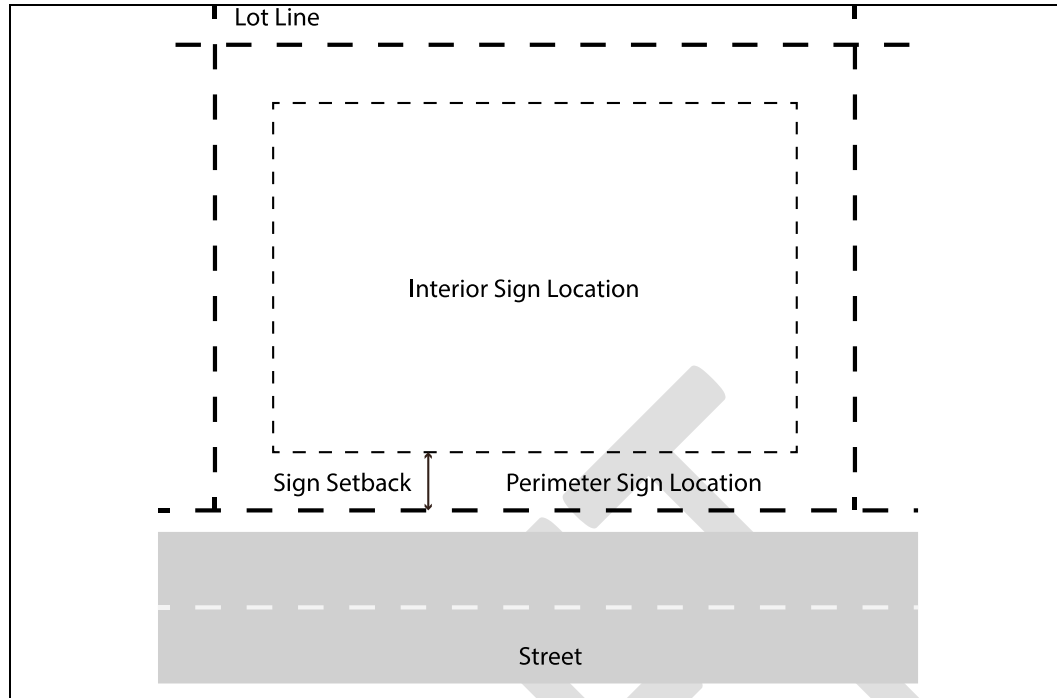
5.08.7 Secondary Signs.³²

- A. Definition. A secondary sign is a small permanent sign that is freestanding or attached to a building that is in addition to the primary sign types for the property and that has a height and scale that is subordinate to the primary sign types allowed for the property. Examples of typical secondary signs include house numbers, occupant directories, directional signs, and parking signs. The list of examples is provided to clarify the regulations and does not limit the content of secondary signs.
- B. Sign Setback. This Subsection regulates the location and size of secondary signs based on a sign setback that varies by sign district. Figure 5.08.7-1. *Secondary Sign Setback* illustrates the sign setback for secondary sign locations.
 1. Measurement. The sign setback is the setback from any property line and regulates the location and size of secondary signs. Table 5.08.7-1. *Secondary Sign Standards* defines the applicable setback for each district. The setback applies to front and side property lines. Setback distance is the horizontal distance from the portion of the sign (base or face) nearest to a road right-of-way or property line.
 2. Perimeter Signs. Perimeter signs are signs located between the property line and the applicable sign setback.
 3. Interior Signs. Interior signs are located within the interior of the lot, further from the property line than the specified sign setback.

Figure 5.08.7-4 Measurement of Sign Face Area for Multi-Faceted Signs

³¹ This subsection provides for window signs with 50% coverage as provided in §16-14-50(j)(2). For simplicity and clarity, the distinction between the allowance for 25% window sign coverage and 50% window sign coverage has been eliminated.

³² This expanded subsection provides a content-neutral allowance for on-site directional signage, which is currently allowed without permit by an exemption in §16-14-30(b)(4). The subsection provides for on-premises signs without a permit based on a setback and scales signs to be oriented towards pedestrians or low-speed motor vehicles.



C. Number and Location.

1. Table 5.08.7-2. *Secondary Sign Standards* defines the maximum number of perimeter secondary signs per entrance to a public way. All perimeter signs must be located within five (5) linear feet from an entrance to a public way parallel to the frontage.
2. Table 5.08.7-3. *Secondary Sign Standards* defines the maximum limit for interior secondary signs based on the number of signs per acre.

Table 5.08.7-4. *Secondary Sign Standards*

Standard	RUR	RES	DCC	CID
Allowed?	Yes	Yes	Yes	Yes
Permit Required?	No	No	No	No
Sign Setback	20 ft.	20 ft.	20 ft.	30 ft.
Perimeter Sign Dimensions				
Number (max. per entrance)	1	1	2	2
Height	4 ft.	4 ft.	4 ft.	4 ft.
Area	2 sf.	2 sf.	2 sf.	2 sf.
Interior Sign Dimensions				
Number (max. per acre)	10	10	10	30
Height	6 ft.	6 ft.	6 ft.	8 ft.
Area	2 sf.	2 sf.	2 sf.	29 at sf.
				1 at 20 sf. ³³

³³ One larger secondary sign is included to allow drive-thru menu boards and similar signs.

Standard	RUR	RES	DCC	CID
Sign Features				
Illumination	NR	NR	Yes	Yes
Manual Reader Board	No	No	No	No
Electronic Reader Board	No	No	No	No
Key: Yes=sign type or characteristic allowed No=sign type or characteristic not allowed NR=sign type allowed for non-residential uses only “—”=standard does not apply.				

5.08.8 Temporary Signs.³⁴

- . Definition. A temporary sign is a sign constructed of cloth, canvas, light fabric, cardboard, wood, wallboard, metal, or other light materials, with or without frames, which is intended for use for a limited period of time only. Temporary signs include banners, feather signs, inflatable devices, stake signs, and A- and T-frame signs. Examples of common temporary signs include political signs, public demonstrations, grand opening signs, contractor signs, real estate signs, and signs that announce an event such as a carnival, circus, or similar event. The list of examples is provided to clarify the regulations and does not limit the content of temporary signs.
- A. Dimension and Location Standards. *Table 5.08.8-1. Temporary Sign Standards* states the standards for temporary signs per lot.
- B. Duration for Display. A sign user may display one temporary sign on each lot without any time limitation. All other temporary signs may only be displayed for 45 days or less per calendar year, measured cumulatively per sign.
- C. Maintenance.
 1. Placement of temporary signs on private property shall require the consent of the property owner.
 2. Temporary signs shall not be illuminated in any manner.
 3. Temporary signs placed in conjunction with an event shall be removed within 72 hours of the conclusion of the event. Temporary signs remaining after 72 hours from the conclusion of the event may be removed by the Director or designee.
 4. Temporary signs shall be constructed of materials and installed in a manner capable of withstanding the forces of wind, rain and other atmospheric conditions.

³⁴ This new subsection provides a content-neutral allowance for temporary signs, which are currently allowed without permit by exemptions in §16-14-30(b)(5) & (6) for political signs and grand opening banners and §16-14-50(g) for real estate signs. The subsection provides for signs without a permit and scales signs based on the existing temporary sign standards and district types. The subsection allows one temporary sign to be displayed indefinitely, which is intended to accommodate long-term temporary signs such as real estate signs and construction signs.

5. Temporary signs which are or become damaged, tattered or unreadable may be removed by the Director or designee.

Table 5.08.8-2. Temporary Sign Standards

Standard	RUR	RES	DCC	CID
Allowed?	Yes	Yes	Yes	Yes
Permit Required?	No	No	No	No
Duration of Display	90 days	90 days	90 days	90 days
Dimensions				
Number	6*	6*	6*	6*
Height	8 ft.	5 ft.	5 ft.	8 ft.
Area	32 sf.	6 sf.	6 sf.	32 sf.
Sign Features				
Illumination	No	No	No	Yes
Manual Reader Board	No	No	No	No
Electronic Reader Board	No	No	No	No
Key: Yes=sign type or characteristic allowed No=sign type or characteristic not allowed NR=sign type allowed for non-residential uses only “—”=standard does not apply. * = 2 signs per property line abutting a street				

5.08.9 Nonconforming and Abandoned Signs³⁵

A. Nonconforming Signs.

1. Permanent signs that conformed to applicable standards in effect before the effective date of this Land Use Code are nonconforming. The sign user may maintain and repair existing nonconforming signs.
2. The property owner must remove an existing nonconforming sign upon a change in use of the property.

- B. Abandoned Signs. If a building, structure, or premises is vacant for a six-month period of time, the owner of the premises shall cover or remove any permanent signs located on the premises.

5.09 Site and Building Design

5.09.1 Purpose. To encourage innovative, quality site planning, architecture and landscaping that reflect improvements in the technology of land development.

5.09.2 Commercial and industrial architecture.

- A. *Elevation and site plans.* Dimensioned elevation drawings or renderings, including front, back, and side elevations, shall be submitted with all site plan applications to illustrate conformance

³⁵ This subsection expands on the provisions for nonconforming and abandoned signs in §§16-14-30(b)(1) & 50(k)-(m). The subsection extends the time triggering removal of abandoned signs from 60 days to 6 months.

with the regulations herein. Elevations shall indicate materials to be installed on all building surfaces.

- B. *Building form.* The design of all buildings shall employ textured surfaces, projections, recesses, shadow lines, colors, window patterns, overhangs, reveals, changes in parapet heights and similar architectural features to avoid monolithic shapes and surfaces and to emphasize building entries. Designs shall not contain unbroken flat walls of greater than fifty (50) feet in length. Buildings having single walls exceeding fifty (50) feet in length shall incorporate one (1) or more of the following at a minimum of every fifty (50) feet:
1. Changes in color, graphical patterning, texture or material;
 2. Projections, recesses and reveals;
 3. Windows and fenestration;
 4. Arcades and pergolas;
 5. Towers;
 6. Gable projections;
 7. Horizontal/vertical breaks; or
 8. Other similar techniques.
- C. *Facade treatment.* The architectural treatment of the front facade shall be continued, in its major features, around all visibly exposed sides of a building.
- D. *Screening.* All air-conditioning units, HVAC systems, exhaust pipes or stacks, elevator housing and satellite dishes and other telecommunications receiving devices shall be thoroughly screened from view from the public right-of-way and from adjacent properties by using walls, fencing, roof elements and landscaping. In addition, all trash facilities, loading and parking areas shall be properly screened. Screening standards can be found in Section 5.04.
- E. *Architectural details.* All materials, colors and architectural details used on the exterior of a building shall be compatible with the building's style and with other nearby buildings.
- F. New buildings and exterior modifications of existing buildings on Cleveland Avenue within the C-2 Downtown Core Commercial District shall comply with the Cleveland Avenue Architectural Guidelines³⁶ contained in Appendix A to the ordinance codified herein, a copy of which is on file at the Town Clerk's office. (Ord. 11-2007 §1)

5.10 Stormwater and Sewer

³⁶ Do these design guidelines exist somewhere? I cannot find them on the Town's website but did find the original ordinance referencing them.

5.10.1 Purpose. The intent of this section is to ensure that the stormwater drainage system addresses the broader goals of drainage and flood control problem alleviation, environmental preservation enhancement that considers water quality, water way stability and natural habitat and resource protection, and the long-term maintenance of the Town's drainage systems.

5.10.2 Excavation, grading, and erosion control

- A. Excavation and grading. Excavation and grading shall comply with the adopted building codes and the Town's Standard Design Criteria and Standard Construction Requirements.
- B. Erosion control. The prevention of soil erosion and transport of sediments during construction is of paramount importance. Development of sites greater than one half (0.5) acre requires an Erosion Control Plan consistent with the State of Colorado's requirements for Stormwater Management Plans (SWMP), and a copy of the stormwater discharge permit obtained from the State of Colorado.
- C. To the maximum extent feasible, site grading and erosion control techniques shall include, but not be limited to:
 - 1. Limitation of land disturbance and grading;
 - 2. Maintenance of natural vegetation;
 - 3. Minimization of impervious surfaces;
 - 4. Use of terraces, contoured landscapes, runoff spreaders, grass or rock-lined waterways;
 - 5. Use of infiltration devices; and/or
 - 6. Use of recharge basins, seepage pits, dry wells, seepage beds or ditches, porous pavement or sub-drain systems.

5.10.3 Site drainage

- A. General. The standards of this Section are intended to protect properties, both private and public, against flooding, erosion, sedimentation, and other encroachment due to storm waters.
 - 1. Peak discharge control is required when post-development runoff rates exceed historic one hundred-year base storm runoff rates due to the change in site conditions as a result of the development. Post-development peak discharge for the minor storm event shall not exceed the historic or pre-development conditions for the minor storm event.
 - 2. The major drainage system that conveys off-site drainage through the development and/or serves as the primary drainage channel for the development and all drainage structures therein must safely convey the base storm peak discharge and maintain them within the confines of public rights-of-way and easements. There is no requirement to provide peak discharge control for the base storm peak discharge.

3. The minor drainage system that collects on-site drainage and conveys it through the development to primary drainage channels and consists of curb, gutter, inlets, storm drains, culverts, swells, ditches and detention facilities shall be designed to convey flows from the minor storm event and maintain their integrity if overtopped by flows from a base storm event.
4. Determination of storm runoff shall be made by the methods defined in the following table:

TABLE 6.3.1: Run-Off Rates Determination Methods

Area of Basin for which Peak Flow or Hydrograph is being Calculated	Specific Applications and/or Basin Characteristics	Determination Method
< 25 acres	To determine storage volume for peak discharge control where basin characteristics are applicable to the rational method	Modified rational method
< 5 acres	Area characteristics not applicable to rational method	NRCS WinTR-55
5 - 25 acres	If on one main tributary, if there are multiple tributaries	NRCS WinTR-55, TR-20
25 -640 acres	All circumstances	TR-20
>640 acres	All circumstances	Army Corps of Engineers HECRAS

5. Waivers from peak discharge control requirements must be requested in writing and must include supporting engineering documentation. Waivers may only be granted when:
 - a. Residential development is occurring that does not require new subdivision of land. Supporting engineering documentation is not required.
 - b. Subdivision will result in a gross residential density of two (2) dwelling units per acre or less. Supporting engineering documentation is not required.
 - c. The increase in peak discharge for the minor storm from the subdivision is less than ten (10) percent over historic levels.
 - d. It has been determined and can be demonstrated that natural or manmade detention facilities exist downstream, there is adequate capacity to handle the increased peak discharge, and the subdivider has obtained legal right to utilize the required capacity of the existing facility.
 - e. It has been determined that detention will cause a deleterious impact relative to base storm drainage and peak discharge.

- f. Additions to existing structures will not result in a net increase of impervious area of a site by more than twenty-five (25) percent.
- B. Master Drainage Report. Unless waived by the Town Engineer, the project engineer shall conduct a Master Drainage Report of the area to be developed and adjacent areas that affect the development. The subdivision of a single, previously subdivided lot into no more than two (2) new lots shall be exempt from drainage studies. The report should implement the drainage design and construction in the format described below. Drainage reports shall include:
1. Off-site flows. Describe the effect of off-site flow rates on the development and how they are affected by the development. Determine the necessary control measures or the proper method of conveyance.
 2. On-site flows. Define the system that will convey the on-site flows (both historic and developed) throughout the development and describe how the flows will be dispersed off-site, based on the methodology shown in the most recent version of the Urban Storm Drainage Criteria Manual, published by the Urban Drainage and Flood Control District.
 3. On-site detention. On-site detention or retention facilities are required to store run-off that represents the difference between the one hundred-year historic run-off and developed storm runoff, and shall limit the rate of runoff from the site to the one hundred-year historic flow rate.
 4. Storm drain system. The design of the interior storm drain system shall follow the standards set forth in the most recent version of the Urban Storm Drainage Criteria Manual, published by the Urban Drainage and Flood Control District. The ten-year storm shall be the criteria for the design of all interior drain systems. The design of cross culverts and bridges of major drainage ways shall accommodate the one hundred-year storm frequency.
- C. Methodology.
1. Rainfall and runoff analysis. The analysis of storm runoff shall be based on the rainfall data taken from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Atlas 2, "Precipitation Frequency Atlas of the Western United States, Volume III - Colorado." The Storm Run-Off Rates Determination Method Table No. 5-8 shall be used for determining the quantity of storm runoff.
 2. Storage (detention/retention). Requisite detention facility volumes can be determined from the criteria found in the Urban Drainage and Flood Control District detention volume estimating workbook. These volumes are minimum requirements.
 3. Storage release mechanism. The release mechanisms from retention/detention ponds shall accommodate recurrence intervals of ten-year and one hundred-year storms by

utilizing a structure which employs both orifice and weir flow control. Other methods of release can be specified as approved by the Town Engineer.

- D. Procedures. Developments shall be required to submit drainage design plans in conjunction with any application that requires submittal of a drainage report/plan.
 - 1. Drainage design plans may be submitted at the preliminary plat or review stage as set forth in Section 2.17.
 - 2. Drainage design plans may be submitted at the building permit stage only when subdivision and zoning for the property have already been approved.

5.10.4 Sanitary sewer

- A. All residential, commercial, and industrial uses shall have sanitary sewer facilities designed by a registered professional engineer in accordance with the regulations and standards of the Colorado Department of Public Health and Environment.
- B. The sanitary sewer system shall be connected to an existing public sanitary sewer system and consist of a closed system of sanitary sewer mains and lateral branch connections to each structure or lot upon which a structure is to be built.
- C. Sanitary sewer lines are to be of sufficient size and design to collect all sewage from all proposed or portable structures within the subdivision or development and designed per the Town of Wellington Standard Design Criteria and Standard Construction Requirements.

5.10.5 Potable water

- A. Pursuant to C.R.S. 29-20-303, the Town shall not approve an application for development unless it determines in its sole discretion, after considering the application and all of the information provided, that the applicant has satisfactorily demonstrated that the proposed water supply will be adequate. For purposes of this requirement, "adequate" means a water supply that will be sufficient for build-out of the proposed development in terms of quality, quantity, dependability, and availability to provide a supply of water for the type of development proposed, and may include reasonable conservation measures and water demand management measures to account for hydrologic variability.
- B. All water utilities shall be designed per the Town of Wellington Standard Design Criteria and Standard Construction Requirements.

5.11 Transportation and Connectivity

5.11.1 Purpose. The purposes of this Section are to:

- A. Establish a safe, efficient, attractive transportation system that promotes all modes of transportation and is sensitive to the environment. (Ord. 11-2007 §1)

- B. Create sidewalks, pathways, and trails that assures a safe, convenient, and attractive pedestrian/bicycle system that minimizes conflicts between vehicles, bicycles, and pedestrians. (Ord. 11-2007 §1)

5.11.2 Applicability. This Section applies to all development within Town limits. All transportation and connectivity measures implemented after the effective date of this Land Use Code complies with this Section.

5.11.3 Streets. The local street system of any proposed development is designed to be safe, efficient, convenient, and attractive and consider the use by all modes of transportation that will use the system. Streets are an inviting public space and an integral part of community design. Local streets provide for both intra- and inter-neighborhood connections to knit developments together, rather than forming barriers between them. All streets should interconnect to help create a comprehensive network of public areas to allow free movement of cars, bicycles, and pedestrians.

A. Street Layout.

1. All streets are aligned to join with planned or existing streets consistent with the approved Street Master Plan included in the Comprehensive Master Plan.
2. The street layout forms an interconnected system of streets primarily in a grid or modified pattern adapted to the topography, unique natural features, environmental constraints, and peripheral open space areas.
3. The street layout emphasizes the location of neighborhood focus points, other internal open space areas, gateways, and vistas.
4. The use of cul-de-sacs and other roadways with a single point of access are minimized.
5. The integration of traffic-calming features within and adjacent to residential areas are utilized when appropriate.

B. Controlling Street Access. A strip of land between a dedicated street and adjacent property is not reserved for the purpose of controlling access to that street from that property.

C. Visibility at Intersections.

1. No shrubs, ground cover, berms, fences, structures or other materials or items greater than thirty (30) inches in height shall be planted, created, or maintained at street intersections within the site distance triangle.
2. The site distance triangle is described by starting at the point where the flow-line of the two (2) intersecting streets meet. Two (2) of the legs follow down the flow-line of the respective streets thirty (30) feet to a point, with the final leg between these two (2) endpoints.
3. Trees are not planted in the site distance triangle.

- D. Pedestrian Crossings at Street Intersections and Mid-block. Pedestrian crossings are accessible to handicapped individuals and mid-block crossings may be required at the time of final plat or site plan approval.
- E. Street and Path Alignment. Street, path, and sidewalk alignment provides for pedestrian, bicyclist, and motorist safety. The street pattern is the most advantageous to serve the adjoining areas. When possible, proposed streets are continuous and in alignment with existing and proposed streets.
- F. Access. Access to all subdivisions shall come from a public street. Driveways are not permitted to have direct access to arterial streets. Driveway access to collector streets may be allowed if access is approved at the time of final plat.
- G. Street Right-of-Way Dedication. The full width of rights-of-way for all streets being platted must be dedicated to the Town. All streets within the Town shall afford public access for emergency services and utilities. In cases where streets form the perimeter of any development have a portion of the proposed right-of-way on an adjacent property, the following standards apply.
 - 1. The developer shall:
 - a. Acquire the other one-half ($\frac{1}{2}$) of the proposed right-of-way property for the Town and then dedicate the right-of-way to the Town;
 - b. If the landowner of the proposed right-of-way property is unwilling to sell the proposed right-of-way property to the developer, the developer shall pay for the cost of an appraisal for the proposed right-of-way property and legal fees for the Town to evaluate the possibility of acquiring the property in the future; or
 - c. Provide for a traffic study establishing that construction of such right-of-way will not be necessary before the likely development of that adjacent property.
 - 2. The developer shall finalize an agreement with the Town which guarantees the construction of the street to Town standards.
- H. Street Standards. Rights-of-way are dedicated and streets are designed and constructed to accommodate present and future traffic volumes in accordance with all standards.
- I. Street Names. Names of new streets comply with the IGA with Larimer County and the Municipalities of Larimer County concerning standardization of street names. New streets which are extensions of, or which are in alignment with, existing streets shall bear the names of those streets. (Ord. 11-2007 §1).

5.11.4 Sidewalks, Pathways, and Trails.

- A. Interconnected Network.
 - 1. A sidewalk network that interconnects all dwelling units with other dwelling units, nonresidential uses and common open space are provided throughout each development.

2. Sidewalks are separate and distinct from motor vehicle circulation to the greatest extent possible.
 3. The pedestrian circulation system shall include gathering or sitting areas and provide benches, landscaping, and other street furniture where appropriate.
- B. Sidewalks Required.
1. In all zoning districts, except for the R-1, LI and I Districts, sidewalks are required along both sides of a street.
 2. Within the R-1 District, pedestrian movement may be accomplished with trails through common space if approved at the time of final plat approval.
 3. Within the LI and I Districts, sidewalk shall be required where properties are adjacent to arterial streets, collector streets, and to provide sidewalk continuity in areas where existing or proposed sidewalks will connect. Additional sidewalks in the LI and I Districts are determined based on reasonably anticipated pedestrian needs and uses on a case-by-case basis.
- C. Sidewalk Width. Sidewalk widths comply with the design standards for the category of streets. Sidewalks adjacent to storefronts in commercial areas are a minimum of ten (10) feet in width, or consistent with the average sidewalk width on a block if building in an area with existing sidewalks.
- D. Sidewalk Location. Sidewalks are located within the right-of-way unless otherwise authorized at the time of final plat approval.
- E. Accessibility. Sidewalks and plazas are accessible to handicapped individuals as required by the Americans with Disabilities Act (ADA) and related requirements.
- F. Lighting. All sidewalks and other pedestrian walkways shall have appropriate lighting, using poles and fixtures consistent with the overall design theme for the development.
- G. Pathways.
1. Pathways are provided to link internal open space areas with peripheral open space areas and shall connect to pathway routes throughout the Town.
 2. Pathway routes are designated between residential areas and commercial and employment centers and schools.
 3. Pathways on local streets may be delineated by bicycle lanes, bicycle routes, or other bicycle or pedestrian facilities.
 4. All other pathways are constructed in accordance with standards established in the Town Parks and Trails Master Plan.
- H. Trails.

1. Trails are provided within and surrounding open space areas and connecting open space areas.
2. Trails are a minimum of eight (8) feet in width and are constructed of an impervious service concrete. However, for specific uses and circumstances, the Board of Trustees may approve construction of other impervious surfaces.
3. Unless the Board of Trustees determines the area would not be used, trails are flanked on one (1) side by a soft surface path a minimum of four (4) feet in width. The soft surface path is constructed with a minimum depth of eight (8) inches of compressed gravel, crowned, and compacted with edging to contain the surface material. (Ord. 11-2007 §1)

DRAFT

CHAPTER 6: Subdivision Regulations¹

6.01 Purpose and Organization

- A. Applicability. This Chapter applies to any subdivision of land within the municipal boundaries of the Town, unless expressly and specifically exempted or provided otherwise.
- B. ²Intent. This Chapter promotes the health, safety, convenience, order, prosperity and welfare of the present and future inhabitants of the Town by:
1. Encouraging new subdivision developments to relate to the Town's historic development pattern.
 2. Promoting compact, well-defined neighborhoods that enhance the Town's character.
 3. Creating livable neighborhoods that foster a sense of community.
 4. Encouraging the proper arrangement of streets in relation to existing or planned streets and ensuring that streets facilitate safe, efficient and pleasant driving, walking and biking.
 5. Providing a variety of lot sizes and housing types in every neighborhood.
 6. Protecting sensitive natural and historic areas and the Town's environmental quality.
 7. Providing for adequate and convenient open spaces for traffic, utilities, access of fire apparatus, recreation, light and air and to avoid congestion.
 8. Providing open spaces for adequate stormwater management.
 9. Providing adequate spaces for educational facilities.
 10. Providing protection from geologic hazards and flood-prone areas.
 11. Ensuring compliance with Chapter 3 through 5 of this Code, the Comprehensive Plan and the Design Standards.³
 12. Regulating such other matters as the Board of Trustees may deem necessary to protect the best interest of the public.

(Ord. 11-2007 §1)

¹ The outline tags this section to Chapter 16, Article 3 of the current Land Use Code. However, many of those provisions apply to more than just subdivision plats – they apply to building permits, expiration of annexations, etc. Could we move those provisions to 5.01 of Chapter 5? Or, rename this Chapter?

² The remainder of Sec. 17-1-10 applies to all development (including development other than subdivisions). Those belong in 1.04 (Applicability) and are deleted here.

³ “Design Standards” is currently defined in 16-2-10 as “the Town Standard Design Criteria and Standard Construction Standards, the Lot and Block Standards beginning at Section 16-3-110; Street Standards beginning at Section 16-3-130; Parking Standards beginning at Section 16-3-150; Sidewalk and Path Standards beginning at Section 16-3-240; Park Standards beginning at Section 16-3-270; Landscape Design beginning at Section 16-3-330.” Is the “the Town Standard Design Criteria and Standard Construction Standards” the “Standard Design Criteria and Standard Construction Requirements” date March 2015 and revised April 2017? If so, these should be incorporated by reference as of the specific revision date, and any future revisions adopted as a text amendment to the Land Use Code (this would be a simple amendment to the revision date).

C. Administration.

1. All plats, plots and replats of land laid out in subdivision or building lots, and associated streets, highways, alleys or other portions of the subdivision, intended to be dedicated to a public use or the use of purchasers or owners of lots fronting or adjacent to that infrastructure require major or minor subdivision plat approval (see sections 2.14 and 2.15 of this Code.
2. No plat shall be recorded in any public office unless it bears (by endorsement or otherwise) approval of the Board of Trustees.
3. Acceptance of proposed public dedications is given by separate action of the Board of Trustees.
4. Pursuant to CRS sections 31-23-227 and 31-23-214(1), the Board of Trustees delegates the authority to approve plat corrections to the Planning Director. Chapter 2 establishes the applicability and workflow for plat corrections.⁴

(Ord. 11-2007 §1)

D. Plat and other approval expiration.

1. This subsection applies to any of the following (referred to as “approvals”):
 - a. Any Final Plat,
 - b. Any plat, plot or replat approved by the Town Board under any prior land use provisions of the Town Code or any prior version of the Town Code,
 - c. Any minor subdivision plat, or
 - d. Any annexation or annexation map.
2. An applicant shall submit an approval for recordation within one year from the date of final approval by the Town Board.
3. When submitted for recordation, the approval shall:
 - a. Be executed by all owners and proprietors (as defined by CRS § 31-23-111), and
 - b. Include payment of all fees and all other submissions or requirements as set forth in the Town Code or the approving ordinance.
4. An approval that is not timely recorded with the items required by subsection 3 above is deemed expired. Any Town Board approvals for an expired approval are deemed lapsed. A lapsed approval requires resubmission and reconsideration of the development or plat application by the approving agency.
5. A conditional approval of an approval does not toll the required one year submission period. Unless the specifically provides otherwise, any condition must be satisfied within the one year submission period.

(Ord. No. 16-2008, 10-28-08)

⁴ Chapter 2 needs to lay out the workflow for plat corrections. I have assembled examples of boundary adjustment and plat correction procedures in Colorado [here](#).

6.02 Design and Improvement Standards⁵

- A. Applicability. This section applies to all development applications and building permit applications (referred to as “applications”). All applications shall comply with the density, dimension, design and zoning standards contained in this Chapter.⁶

(Ord. 11-2007 §1)

- B. Relation to zone district standards. Chapters 3 and 4 of this Code prevail over any conflicting standards in this section.

(Ord. 11-2007 §1)

- C. Community Design Principles.⁷ The design, layout, and orientation of subdivisions, lots, buildings and infrastructure shall be consistent with the Comprehensive Plan.

1. The community design standards set forth in this Section apply to every development proposal. The Town's goal is to expedite the planning review process by clearly outlining the Town's expectations for new development.
2. The Planning Commission and Board of Trustees will evaluate each subdivision plat based on the standards in this section and the context within which a project is located. The standards are intended to be specific enough to guide development, but not to preclude creative design solutions. Applicants must substantially conform to the design standards unless they demonstrate that an acceptable alternative meets one (1) or more of the following conditions:
 - a. The alternative better achieves the stated intent;
 - b. The intent is not achieved by application of the standards in this circumstance;
 - c. The effect of other standards are improved by not applying a specific standard; and/or
 - d. Strict application or unique site features make the standard impractical.

(Ord. 11-2007 §1)

3. Design elements. One of the greatest challenges facing small towns is the successful integration of new development with the original Town pattern. Suburban development patterns that include numerous cul-de-sacs and limited street connections often separate communities and create

⁵ The following sections are omitted here: 16-3-150 to -230 (parking), which go to section 5.05; 16-3-130 to -250, which go to section 5.11 (Transportation and Connectivity); 16-3-270 to -320, which go to section 5.06 (Parks and Open Space); 16-3-330 to -350 and -370 to -400, which go to 5.04 (Landscaping and Screening); 16-3-360, which goes to section 5.10 (Stormwater & Sewer); 16-3-410 to -420 and -460, which goes to 5.09 (Site and Building Design); 16-3-430 to -440, which goes to 5.03 (Fences); and 16-3-450, which goes to 5.02 (Exterior Lighting).

⁶ Move to 5.01? If this section is not renamed, anything in this section that should apply to any building permit should move to 5.01, and this section should include only those items reviewed for subdivision applications.

⁷ Should we move these to the beginning of Chapter 5, and apply them to any discretionary application (including rezoning, conditional use permit, etc.)?

enclaves of the original towns. To maintain the Town's unique, small-town character and clearly describe the Town's vision, the following design elements established:

- a. Compact urban growth. As the community grows from the original Town limits, it is important to maintain a continuity of density, diversity and interconnectedness. Urban development should occur adjacent to the Town's core so that the community's prime agricultural land and natural areas are preserved and public infrastructure and utilities are used as efficiently as possible.
- b. Neighborhood design. New developments should create or augment neighborhoods, rather than single-use residential subdivisions adjacent to one another. Neighborhoods should be organized around a strong center, which may include elements such as common open space, civic and commercial or mixed uses. Street and building design and placement shall facilitate pedestrian movement, the character of streets and sidewalks as inviting public space and the interconnectedness of the streets within the neighborhood and as they connect to the rest of the community. In addition, new neighborhoods shall have a variety of housing sizes and types that help to create a distinct identity rather than a monotonous replication of styles.
- c. Lots and blocks, streets and sidewalks. The layout of lots and blocks shall continue the Town's existing block pattern to form a grid or modified grid pattern that is adapted to the topography, natural features and environmental considerations. The streets shall connect to create a comprehensive transportation network that facilitates the movement of pedestrians, cars and bicycles.
- d. Parks and open space. New developments shall use natural open spaces and developed public space (such as parks and plazas) to organize and focus lots, blocks and circulation patterns, protected natural areas and quality agricultural land and to create an identity for each neighborhood.
- e. Site design, architecture and landscaping. This Chapter encourages innovative, quality site design, architecture and landscaping to create new places that are integrated with the existing community and reflect the traditional patterns of the region.
- f. Environment. New developments shall be designed to fit within the environment. To the greatest extent feasible, sites shall preserve natural areas and the plants and wildlife inhabiting those areas. In addition, new developments shall conserve natural resources, especially water.
- g. Water conservation. As the Town and the State grow, increasing pressure is placed on limited water resource supplies. This can impair water quality and deplete water quantity. All new development shall use raw water for irrigation and to incorporate water-saving measures in

building design and landscaping. Developments shall use stormwater management techniques that address water quality as well as quantity.

(Ord. 11-2007 §1)

4. Compact urban growth.⁸ The Comprehensive Master Plan includes a compact urban growth policy that encourages and directs development to take place within areas contiguous to existing development in the community. This policy will accomplish several goals, including:
 - a. Improving air quality by reducing vehicle miles traveled and by promoting alternatives to the private automobile;
 - b. Preserving natural areas and features, particularly in the periphery of the Town;
 - c. Making possible the efficient use of existing infrastructure and cost-effective extensions of new services;
 - d. Encouraging infill development and reinvestment in built-up areas of the Town; and
 - e. Promoting physical separation from neighboring communities to help each maintain its individual identity and character.

(Ord. 11-2007 §1)

5. Growth management. The Town has established a Growth Management Area as part of the Comprehensive Plan. This is the area reasonably anticipated for annexation. and the plan policies direct growth to established growth boundaries and provide for the coordination of future development in level of service (LOS) standards for infrastructure. The comprehensive plan establishes policies for “purposeful growth” based on thoughtful and well-planned increases in density and intensity that honor and protect town character and values, contains development within its existing and designated footprint is contained, preserves valuable surrounding farmland and open space, promotes efficiencies in infrastructure provision and maintenance, offers adequate facilities, and advances a thriving economy that makes the town self-sufficient. No development shall be approved unless it is located within the established planning boundaries and is consistent with the Comprehensive Plan.

(Ord. 11-2007 §1)

6. Neighborhood design principles. To encourage the creation of viable neighborhoods that interconnect with each other and integrate new projects into the existing community, thereby strengthening the original Town, the neighborhood layout shall continue the street, lot and block pattern of the original Town, as well as solar orientation, topography, sensitive wildlife and vegetation, drainage patterns and environmental and regional climate issues. Further, the edges of neighborhoods should be formed by features shared with adjacent neighborhoods, such as

⁸ Do we need to update this based on the draft comprehensive plan?

major streets, changes in street pattern greenways or natural features such as streams and major drainage or riparian corridors. New streets, bikeways, sidewalks, paths and trails shall connect to existing adjacent neighborhoods.

(Ord. 11-2007 §1)

7. Neighborhood structure. The following is a summary of essential elements to consider integrating into new neighborhoods:
 - a. Street, sidewalk and trail connections within new neighborhoods that connect to adjacent existing neighborhoods and strengthen the connection to the existing town.
 - b. Streets that encourage pedestrian activity by creating an inviting atmosphere through attention to the details of landscaping and tree locations, sidewalks, lighting and the building architecture, etc.
 - c. A mixed-use neighborhood center located for easy access.
 - d. A variety of housing types, sizes, densities and price ranges that are well integrated.
 - e. A variety of land uses that are well integrated and a transition of intensity. Nonresidential uses, larger buildings and attached multi-family housing shall locate near commercial centers with a transition to smaller buildings closer to low density neighborhoods.
 - f. Pedestrian and bike connections throughout residential neighborhoods and linked to neighborhood commercial or civic centers and open space systems.
 - g. Parks, open space, public plaza and greens that are well integrated into the neighborhood.
 - h. Street trees (subject to water conservation considerations).
 - i. Architectural, landscaping and site design elements of new developments as outlined in this section.

(Ord. 11-2007 §1)

8. Neighborhood; general provisions. The following principles are contained in the original "Old Town" of the Town. The Comprehensive Plan identifies them as contributing to the Town's small-town character. Although the size of individual development proposals will vary, projects will be evaluated with consideration to these neighborhood design principles and the context within which a project is located. Failure to incorporate these design principles into a project may be cause for denial of the project by the Board of Trustees.
 - a. Each neighborhood has a center and an edge. It is important that every neighborhood have activity centers that draw people together. Use natural and man-made features, such as a drainage ways, major roadways and ditches to define neighborhood edges. Buildings or other features located at gateways entering a neighborhood shall mark the transition into and out of the neighborhood in a distinct fashion using massing, additional height, contrasting materials and/or architectural embellishments to obtain this effect.

- b. Mix of types of dwelling units. A mix of dwelling unit types shall be distributed throughout the development.
- c. Focal points. Focal points, or points of visual termination, shall generally be occupied by more prominent, monumental buildings and structures that employ enhanced height, massing, distinctive architectural treatments or other distinguishing features, as well as landscape features.
- d. Public space as development framework. Public space is used to organize blocks and circulation patterns and to enhance surrounding development. Public open space must be functional and easily accessible and shall be designed to organize the placement of buildings to create an identity for each neighborhood. Buildings should face public open space to allow for casual surveillance.
- e. Design streets as public spaces.
 - i. Buildings shall define streets by using relatively uniform setbacks along each block. Subject to water use considerations, the streetscape shall also be reinforced by lines of shade trees planted in the right-of-way landscape strip and may be further reinforced by walls, hedges, landscaping or fences which define front yards.
 - ii. On a lot with multiple buildings, those located on the interior of the site shall relate to one another both functionally and visually. A building complex may be organized around features such as courtyards, greens or quadrangles which encourage pedestrian activity and incidental social interaction. Smaller, individualized groupings of buildings are encouraged. Buildings shall be located to allow for adequate fire and emergency access.
- f. Order rather than repetition. The orderly arrangement of design elements can unify a space even when the elements are not the same. The location of sidewalks relative to streets, building setbacks and orientation and the placement of trees (subject to water use considerations) can all help create an overall impression of unity even though each home or building has a distinct character.
- g. Use human proportion. Buildings shall be considered in terms of their relationship to the height and massing of adjacent buildings, as well as in relation to the human scale. (In a small town, this means generally one-, two- and three-story buildings.)
- h. Define the transition between the public and private realm. Buildings shall be located to front towards and relate to public streets or parks, both functionally and visually, to the greatest extent possible. Wherever possible, buildings shall not be oriented to front towards a parking lot.

- i. Encourage walking and bicycling. Sites shall be designed to minimize conflicts between vehicles, bicycles and pedestrians. Pedestrian and bicycle access and connections shall be designed to enhance transportation on foot and by bicycle.
- j. Neighborhoods shall have a mix of activities available rather than a purely residential land use. Neighborhood residents shall have convenient access to parks, schools, open space, trails and services. The optimum size of a neighborhood is one-quarter ($\frac{1}{4}$) mile from center to edge.
- k. Fit within the environment rather than on top of it. New developments shall be designed to respond to the natural environment, fit into the setting and protect scenic view corridors. Key design considerations shall include a site layout that responds to natural features both on- and off-site, the size of structures and materials used in the development and the transition between the development and the surrounding landscape.
- l. Housing types and styles that reflect the architecture of the region. Familiar architectural styles shall play an important role in developing an architectural identity for neighborhood dwellings.

(Ord. 11-2007 §1)

D. Lots and blocks.

1. Intent. The intent of the block and lot standards is to continue the Town's existing block pattern in a manner that is compatible with site-specific environmental conditions.

(Ord. 11-2007 §1)

2. General provisions. Streets shall be designed in accordance with this Chapter and the Town's Design Standards to create blocks that consider interconnectedness, topography, solar orientation, views and other design features. The length of blocks in "Old Town" is typically four hundred (400) feet. Thus, to the greatest extent possible, blocks shall be designed to have a length of between three hundred (300) feet and seven hundred (700) feet (nonresidential streets).

The lengths, widths and shapes of blocks shall be designed to accommodate the following:

- a. Provision of adequate building sites suitable to the special needs of the type of use contemplated.
- b. Need for convenient access, control and safety of vehicular and pedestrian traffic circulation.
- c. Limitations and opportunities of topography.
- d. Lot dimension and configuration. Lot size, width, depth, shape and orientation and minimum building setback lines shall conform to Chapters 3 and 5 of this Chapter and shall facilitate the placement of buildings with sufficient access, outdoor space, privacy and view.
- e. Depth and width of properties shall be adequate to provide for off-street parking, landscaping and loading areas required by the type of use and development contemplated.

3. Lot frontage. All lots shall have frontage that is either adjacent to or directly accessible to a street. Flag lots are prohibited unless otherwise approved by the Board of Trustees.
4. Corner lots. Corner lots for residential use shall have extra width to accommodate side elevation enhancements, such as porches and bay windows, the required building setback and utility easements on both street frontages. For a corner lot, the front of the lot is defined as the side having the shortest street frontage. In the case of a reverse corner lot, both sides abutting a street shall maintain a front yard setback.
5. Double frontage. Double frontage lots for residential uses are not permitted except where essential to provide separation of residential properties from arterial streets or commercial uses, or to overcome specific disadvantage of topography and orientation. A planting screen easement of at least ten (10) feet in width, across which there shall be no vehicular right of access, is required along the property line of lots abutting an arterial street or other high traffic or conflicting use.
6. Residential lots adjacent to arterial streets. Residential lots that are adjacent to an arterial street shall comply with the following:
 - a. Lots where dwelling units do not face, an arterial street (i.e., rear yards abut the street), shall:
 - i. have a minimum depth of one hundred fifty (150) feet,
 - ii. prohibit direct access to the street,
 - iii. Include a minimum street setback of seventy-five (75) feet.
 - b. Lots where dwelling units do not face the arterial street or are side loaded relative to the street, shall:
 - i. Include a front or side setback to the house, respectively, of at least fifty (50) feet, And
 - ii. Apply additional buffering techniques per section 5.04 of this Land Use Code.
7. Residential lot access to adjacent street.⁹
 - a. Driveway access to a local or collector street from a single-family detached residential lot is limited to one (1) driveway curb-cut or driveway access of no greater than twenty (20) feet in width. A circular drive in which each access to the local or collector street is less than ten (10) feet in width, separated by at least thirty (30) feet, and which is constructed as an integral part of the overall architectural design of the single-family residence, is considered a single driveway access.
 - b. Driveway access to a local street from a single-family detached residential lot shall be greater than fifty (50) feet from the intersection of the local street and a collector street or one hundred twenty-five (125) feet from the intersection of the local street and an arterial street as measured from the intersecting right-of-way lines.

⁹ This material probably belongs in 5.11 (Transportation and Connectivity (includes roads & streets)). Move it there?

- c. Driveway access to a collector street from a single-family detached residential lot shall be greater than one hundred twenty-five (125) feet from the intersection of the collector street and a local street, another collector street or an arterial street as measured from the intersecting right-of-way lines.
- 8. Multi-family residential, commercial, business and industrial lot access to adjacent street.
 - a. Driveway access to a local or collector street from a multi-family residential, commercial, business or industrial lot shall be greater than one hundred twenty-five (125) feet from any street intersection as measured from the intersecting right-of-way lines;
 - b. Driveway access to an arterial street from a commercial, business or industrial lot shall be at least two hundred fifty (250) feet from any intersection on the arterial street, or from another commercial, business or industrial lot's access as measured from the intersecting right-of-way lines or driveways; or
 - c. If subsection C.2 applies, driveway access to a local street, collector street or arterial street from a multi-family residential, commercial, business or industrial lot shall be determined by a traffic study approved by the Town.

(Ord. 11-2007 §1)

6.03 Dedications¹⁰

- A. Streets. All street rights-of-way shall be dedicated to the Town.
- B. Sidewalks, walkways, and multi-use trails.
 - 1. All walkways, sidewalks, and multi-use paths located within the right-of-way shall be dedicated to the Town
 - 2. All walkways, sidewalks, and multi-use paths that are not located with the right-of-way shall be dedicated to a duly formed owners' association.
- C. Utilities.
 - 1. Utility easement width. Utility easement widths and locations shall comply with the design standards. Location and adequacy of utility easements is subject to the approval and acceptance of the Town or applicable utility companies.
 - 2. Multiple installations within easements. Easements shall be designed to provide efficient installation of utilities. Public utility installations shall be located to permit multiple installations within the easements. The developer will establish final utility grades prior to utility installations.
 - 3. Underground utilities.

¹⁰ Sec. 16-3-260(d)(street lighting) is omitted, and belongs in either 5.02 (Exterior Lighting) or 5.11 (Transportation and Connectivity). 16-3-260(e)(Northern Colorado Water Association) belongs in Chapter 5 – in the outline, I added a new section 5.12 (water).

- a. Telephone lines, electric lines, cable television lines and other utility services shall be placed underground.
 - b. The subdivider shall comply with this Section and shall make the necessary arrangements, including any construction or installation charges, with each utility provider for the installation of underground facilities.
 - c. Transformers, switching boxes, meter cabinets, pedestals, ducts and other facilities necessarily appurtenant to underground utilities shall be placed underground or on the surface but not on utility poles.
4. Transformers shall be placed outside of the vision clearance triangle with placement approved by Town staff during construction.
 5. Screening or fencing is required (see section 5.04).
 6. Electric transmission and distribution feeder lines and their necessary appurtenances may not be placed above ground unless they carry greater than 115 kV. Those facilities shall be placed within easements or public streets, or in private easements or rights-of-way.
- D. Park and open space. Parks and open space shall be dedicated to the Town per the quantities detailed in section 5.06 of this Land Use Code.

6.04 Subdivision Improvements and Development Agreements

6.01.1 Public Improvements

- A. The Town shall require a developer to execute a Development Improvements Agreement (DIA) for public improvements agreeing to construct all public improvements required by this Land Use Code, Standard Design Criteria and Standard Construction Requirements, or other applicable regulation of the Town.
- B. Developers shall provide to the Town a construction security for at least one hundred (100) percent of the cost of the required public improvements in the form of a development bond, letter of credit, cash, certificate of deposit or other means, as determined by the Board of Trustees, to complete said public improvements in accordance with approved development plans.
- C. No subdivision plat shall be signed by the Town or recorded at the Office of the Larimer County Clerk and Recorder, and no building permit shall be issued for development, until a DIA has been executed and construction security has been posted.
- D. The DIA shall include a list of all agreed-upon public improvements, an estimate of the cost of such improvements, the form of construction security for the improvements, and any other provisions or conditions deemed necessary by the Town Board to ensure that all public improvements will be completed in a timely, cost-effective manner that meets the Town's engineering standards. A DIA shall run with and be a burden upon the land described in the agreement.

- E. The Town, at its discretion, may require the developer to execute other agreements or contracts setting forth the plan, method, and parties responsible for the construction of any required public improvements shown in the approved documents.
- F. All public improvements shall be inspected by the Planning Director upon completion. If it is determined that the required public improvements are not constructed in compliance with specifications, a list of specific deficiencies shall be provided to the subdivider with the request that such deficiencies be corrected before preliminary approval will be granted. If it is determined that the subdivider will not construct any or all of the public improvements or remedy the deficiencies in accordance with the construction plans, the Town Council may withdraw and employ from the construction security such funds as may be necessary to construct the public improvements or remedy deficiencies.
- G. The following public improvements shall be constructed unless waived by the Town Board.
 - 1. Road base, grading, and surfacing.
 - 2. Curbs and gutters and driveway returns.
 - 3. Street lights.
 - 4. Sidewalks, multi-use paths/trails and open space development.
 - 5. Sanitary sewer collection system.
 - 6. Fire hydrants and assembly.
 - 7. Storm sewers, storm drainage system or manholes, as required.
 - 8. Utility distribution system for public parks, open space, and medians.
 - 9. Street signs at all street intersections and other traffic signs.
 - 10. Permanent reference monuments and monument boxes.
 - 11. Berm, fence, or buffer along major arterial and collector streets and surrounding development.
 - 12. Required landscaping and street trees.
 - 13. Erosion control.
 - 14. Domestic water system.
 - 15. Electricity.
 - 16. Natural gas.
 - 17. Telephone and cable.
- H. The required time for the completion of all required improvements shall be two (2) years from the recording date of the final plat. Town Council may extend such time for completion at the request of the subdivider. When such improvements are not completed within the required time, the Town may use the collateral to complete the required improvements, withhold building permits, or revoke approval of the final plat.
- I. Warranty.

1. All workmanship and materials for all required public improvements shall be warranted by the subdivider for a period of two (2) years from the date of the Town's acceptance of the required public improvements.
2. The subdivider shall post a warranty security in an amount established by the Town, in its sole discretion. The warranty security shall not exceed one hundred (100) percent of the cost to reconstruct the improvements. The Town shall not release the construction security until the Town has granted final acceptance of the improvements.
3. In the event that any other provision of this Land Use Code or specifications adopted pursuant thereto, or the DIA requires a warranty of workmanship or materials for a different period of time or for a greater amount of construction security, that provision shall apply.
4. The inspection or acceptance of any required improvement by the Town shall not relieve the subdivider of his or her warranty of workmanship and materials.

7.5.2. Private Improvements

- A. In addition to a DIA for public improvements, the Town shall require developers to execute a DIA for private improvements stating the developer agrees to construct all private improvements shown in the final plat documents. The developer shall also post sufficient construction security, in the judgment of the Town, to complete said improvements in accordance with the approved design and time specifications. No subdivision plat shall be signed by the Town or recorded at the Office of the Larimer County Clerk, and no building permit shall be issued for development, until a DIA between the Town and the developer has been executed and construction security has been posted. The DIA shall include a list of all agreed-upon private improvements, an estimate of the cost of such improvements, the form of financial guarantee, and any other provisions or conditions deemed necessary by the Town Board to ensure that all private improvements will be completed in a timely, quality, and cost-effective manner. A DIA shall run with and be a burden upon the land described in the agreement.
- B. The Town, at its discretion, may require the developer to execute other agreements or contracts setting forth the plan, method, and parties responsible for the construction of any required private improvements shown in the final plat documents.
- C. All private improvements shall be inspected by the Director upon completion. One hundred (100) percent of the construction security shall be released within thirty (30) days of private improvements inspection approval.
- D. The required time for the completion of all required private improvements shall be two (2) years from the recording date of the final map or plat. The Town Board may extend such time for completion upon request from the subdivider. When such improvements are not completed within the required time, the Town may use the construction security to complete the required private improvements, withhold building permits, or revoke the final plat approval.

CHAPTER 7: NONCONFORMITIES AND VESTED PROPERTY RIGHTS

7.01 Nonconformities¹

7.01.1 Purpose. This chapter governs uses, buildings, structures, lots, and other situations that came into existence legally prior to the effective date of this Code or the effective date of future amendments to this Code, but do not comply with or conform to one or more requirements of this Code. All such situations are collectively referred to as “nonconformities”.

7.01.2 General Policy. While nonconformities may continue, this chapter is designed to curtail substantial investment in nonconformities to bring about their eventual improvement or elimination to preserve the integrity of this Code and the character of the Town. Any nonconformity or site condition that becomes nonconforming because of any subsequent rezoning or amendment to this text of this Code may be continued or maintained only pursuant to this chapter. Also, this chapter intends to reduce vacancies, promote appropriate redevelopment and re-use of existing structures and lots, and establish requirements.

7.01.3 Continuation Permitted. Any nonconformity that legally exists on ***², or that becomes nonconforming upon the adoption of any amendments to this Code, may be continued pursuant to this chapter.

7.01.4 Determination of Nonconformity Status. In all cases, the burden of establishing that any nonconformity is a legal nonconformity is solely upon the owner of that nonconformity.

7.01.5 Repairs and Maintenance. Incidental repairs and normal maintenance of nonconformities are permitted unless those repairs increase the extent of nonconformity or are otherwise expressly prohibited by this Code. Structures may be structurally strengthened or restored to a safe condition, in accordance with an official order of a public official.

7.01.6 Tenancy and Ownership. The status of a nonconformity is not affected by changes of tenancy, ownership, or management.

7.01.7 Exception Due to Variance or Modification. This chapter shall not apply to any development standard or feature that is the subject of a variance or modification granted by the Zoning Board

¹ This section proposes new language from the consultant team’s best practices that strengthens the Town’s existing nonconformity language.

² Date of Code adoption

of Adjustment. Where a variance or modification has been granted for a development standard that does not otherwise conform to the requirements of this Code, that development standard is deemed conforming.

7.01.8 Enforcement of Requirements. The Town may withhold necessary permits, inspections, or other approvals to ensure compliance with this chapter.

7.01.9 Nonconformity Due to Town Action. A use, lot, or structure conforming to Town ordinance shall not be considered nonconforming if the Town reduces the size of the lot on which the structure is located by widening an abutting street or through the exercise, or potential exercise, of the Town's eminent domain power. Any status claimed under this subsection must be the result of Town action only and not otherwise result in a situation that jeopardizes the public health, safety, or welfare. Further, the Town's action must make it impossible or highly impracticable for the structure to be brought into conformity with this Code. The right to rebuild or add-on shall not be given to properties described in this subsection. This subsection is intended to provide conforming status for the use, lot, or structure immediately after such Town action, only regarding the following requirements:

- A. The amount of square footage removed from the structure's minimum required lot area by the Town action;
- B. The number of linear feet removed from the structure's minimum required lot depth or width by the Town's action;
- C. The number of linear feet removed from the structure's minimum required front setback, side setback, or rear setback by the Town's action;
- D. The number of then existing properly marked parking spaces removed from the structure's minimum required off-street parking by the Town's action;
- E. The increased percentage of lot coverage directly attributable to the Town's action; and
- F. The landscaping requirement.

7.01.10 Nonconforming Uses.

- A. General. Any use of land that was legally in existence and nonconforming on the effective date of this Code and has been in regular and continuous use, but which does not conform to the use regulations prescribed by this Code, shall be deemed a nonconforming use.
- B. Registration of Nonconforming Uses³. The operator, owner, or occupant of any nonconforming uses of land or buildings shall, within 365 calendar days after the date on which the same became nonconforming, register such nonconforming use by obtaining a certificate of occupancy from the Building Official. The certificate of occupancy (nonconforming) shall be considered as evidence of the

³ We need to check with the Building Official for how we might keep these records or if there's an appetite for this.

legal existence of a nonconforming use, as contrasted to an illegal use or violation of this Code. The Building Official shall maintain a register of all certificates of occupancy issued for nonconforming uses.

C. Change of Use.

1. A nonconforming use may only be changed to a conforming use allowed in the zoning district in which it is located.
2. Once a nonconforming use is converted to a conforming use, it shall not be changed back to a nonconforming use.
3. A nonconforming use shall not be changed to another nonconforming use.

D. Enlargement or Extension of Nonconforming Use. There shall be no increase in the floor area or the land area devoted to a nonconforming use or other enlargement or extension of a nonconforming use beyond the scope and area of its operation at the time the regulation that made the use nonconforming was adopted.

E. Loss of Legal Nonconformity Status.

1. Abandonment. If a nonconforming use is discontinued or ceases for any reason for a period of more than 365 calendar days, the use shall be considered abandoned. Once abandoned, the legal nonconforming status shall be lost, the right to operate the nonconforming use shall cease, and re-establishment of the nonconforming use shall be prohibited. Any subsequent use of the property shall comply with the regulations of the zoning district in which it is located. If a nonconforming use is discontinued or ceases, but is re-established within 365 calendar days, then the nonconforming use may continue, provided the nature and degree of the nonconformity will not be changed or increased from that which existed before the nonconforming use was abandoned.
2. Damage or Destruction.
 - a. If the structure in which a nonconforming use is housed, operated, or maintained is destroyed by any means to the extent of more than 50 percent of its fair market value, the use may not be re-established except in compliance with all regulations applicable to the zoning district in which it is located.
 - b. If the structure in which a nonconforming use housed, operated, or maintained is partially destroyed, where the damage does not exceed 50 percent of its fair market value, the nonconforming use may be allowed to continue and the structure may be rebuilt but not enlarged upon approval of a building permit.
3. Action by the Zoning Board of Adjustment. The right to maintain or operate a nonconforming use may be terminated by the Zoning Board of Adjustment in accordance with the provisions of this Code.

7.01.11 Nonconforming Lots.

- A. No use or structure shall be established on a lot of record that does not conform to the lot area, lot width, or lot depth requirements established in this Code for the zoning district in which it is located, except as otherwise provided for in this section.
- B. Residential Lots.
 - 1. Lot Size. If a lot of record created by subdivision has less width or area than the minimum requirements of the district in which the lot is located, the standard for width or area shall not prohibit the erection of a structure if the lot width and area do not vary more than 10 percent from the minimum requirements of the district in which the lot is located.
 - 2. Setbacks.
 - a. Setbacks made nonconforming by the adoption of this Code are exempt from the requirements of this section if the following findings can be made:
 - i. The proposed addition or alteration will either meet current setback requirements or will not encroach any further into the required setback than the existing structure; and
 - ii. If the proposed alteration or addition is located on the side of the existing dwelling, and there is a minimum distance of 10 feet between the side of the existing structure and the nearest dwelling on the adjoining property.
 - b. Residential lots with setbacks made nonconforming by the installation of roadways or other easements/property line adjustments created or enacted by a governmental entity are also exempt from the requirements of this section, and are not required to address the finding(s) above.
- C. Adjacent Lots in Single Ownership. If two or more adjacent and vacant nonconforming lots are in single ownership at any time, and such lots individually have less width or area than the minimum requirements of the district in which such lots are located, then such lots shall be considered in combination and treated as a single lot or several lots that meet the minimum requirements of this Code for the district in which they are located. Any construction, replacement, or enlargement of a dwelling or building requires the appropriate subdivision procedures of all necessary lots to achieve compliance with the provisions of this Code.

7.01.12 Nonconforming Buildings/Structures.

- A. General. A nonconforming structure is a building or structure the size, dimension, design, or location of which was lawful prior to the adoption, revision, or amendment of this Code, but which fails to conform to the requirements of the development regulations applicable to the property by reasons of such adoption, revision, or amendment.
- B. Continuation of Use. Except where prohibited by this chapter, a nonconforming structure may be used for any use allowed in the underlying zoning district, including a legal nonconforming use.

- C. Maintenance and Repair. The maintenance or minor repair of a nonconforming structure is permitted, provided that the maintenance or minor repair does not extend or expand the nonconforming structure. For the purposes of this subsection, “maintenance and minor repair” means:
1. Repairs that are necessary to maintain and to correct any damage or deterioration to the structural soundness or interior appearance of a building or structure without expanding or altering the building or structure;
 2. Maintenance of land areas to protect against health hazards and promote the safety of surrounding land uses; and
 3. Repairs that are required to remedy unsafe conditions that cause a threat to public safety.
- D. Enlargement and Expansion. A nonconforming structure in which only permitted uses are operated may be enlarged or expanded if the enlargement or expansion can be made in compliance with all of the provisions of this Code established for structures in the district in which the nonconforming structure is located. Such enlargement or expansion shall also be subject to all other applicable Town ordinances.
- E. Loss of Nonconforming Status/Damage or Destruction.
1. Continuation of Nonconforming Structure. The use of a nonconforming structure may be continued subsequent to the effective date of this Code, if that such continuance is in accordance with the provisions of this chapter and all other applicable codes of the Town necessary to ensure adequate protection and safety of adjacent property and the users and occupants of such nonconforming structure. However, the right to continue a nonconforming structure shall cease and such use contained therein shall conform to the provisions of this Code under any of the following circumstances:
 - a. If a nonconforming structure is destroyed by any means to the extent of more than 50 percent of its fair market value, it may not be re-established except in compliance with all regulations applicable to the zoning district in which it is located. This provision shall not apply to single-family dwelling units in residential zoning districts, which may be reconstructed with substantially the same floor area, provided there is no increase in any other nonconformity.
 - b. If the nonconforming structure is partially destroyed, where the damage does not exceed 50 percent of its fair market value, the nonconforming structure may be rebuilt but not enlarged upon approval of a building permit.
 2. Action by the Zoning Board of Adjustment. The right to maintain or operate a nonconforming structure may be terminated by the Board of Adjustment in accordance with the provisions of this Code.

7.01.13 Nonconforming Signs. Nonconforming signs shall follow the regulations established in Chapter 5.08.9.

7.01.14 Termination.

- A. The violation of any of the provisions of one or more of the following categories or ordinances or requirements shall cause the immediate termination of the right to operate such nonconforming use:
 - 1. Constructing, maintaining, or operating a use conducted in, or associated with, a building or structure erected without a permit from the Town;
 - 2. Operating a use or occupying a building or structure without a valid Certificate of Occupancy from the Town;
 - 3. Operating a use in violation of a valid Certificate of Occupancy;
 - 4. Unlawful expansion of a nonconforming use or nonconforming structure;
 - 5. Unlawful outside display or storage in required parking spaces;
 - 6. Violation of any provision of a federal or state statute with respect to a nonconforming use;
 - 7. Violation of any provision of an ordinance of the Town with respect to a nonconforming use.
- B. It is the clear intent of this subsection that nonconforming uses that operate unlawfully shall be considered illegal uses. Illegal uses shall not be considered nonconforming regardless of remedial measures taken to resurrect nonconforming status.
- C. For purposes of this subsection, the term "violation" shall mean a final finding by a court of record that an ordinance has been violated⁴.

7.02 Vested Property Rights

7.02.1 Purpose. The purpose of this chapter is to provide the procedures necessary to implement the provisions of Article 68 of Title 24, C.R.S. (Ord. 11-2007 §1)

7.02.2 Request for Site-Specific Development Approval. For those developments for which the landowner wishes the creation of vested property rights pursuant to Article 68 of Title 24, C.R.S., the landowner shall request the approval in writing at least thirty (30) days prior to the date said approval is to be considered. Failure of the landowner to request such an approval renders the plan not a site-specific development plan, and no vested property rights shall be deemed to have been created. (Ord. 11-2007 §1)

7.02.3 Notice and Hearing. No site-specific development plan shall be approved until after a public hearing called for that purpose, preceded by notice of such hearing published as provided by law at least fourteen (14) days before the hearing. Such notice may, at the Town's option, be combined with any other required notice. At such hearing, all interested persons shall have an opportunity to be heard. (Ord. 11-2007 §1)

⁴ Staff wants more understanding of the intent. Possibly send the violation to municipal court and if found guilty, somehow document that the nonconforming status is terminated. Then if terminated, establish a length of time for compliance, and possibly send them back to court for failure to bring the nonconformity into compliance. Would we court order the remedy? Things to consider as we move forward with revisions.

7.02.4 Approval, Conditional Approval, Effective Date, Amendments, Referendum, and Review.

- A. A site-specific development plan shall be deemed approved upon the effective date of the ordinance granting final approval of the plan. The vested property right shall attach to and run with the applicable property and shall confer upon the landowner the right to undertake and complete the development and use of said property under the terms and conditions of the site-specific development plan, including any amendments thereto.
- B. The Board of Trustees may approve a site-specific development plan upon such terms and conditions as may reasonably be necessary to protect the public health, safety and welfare. Such conditional approval will result in a vested property right, although failure to abide by such terms and conditions will result in a forfeiture of vested property rights.
- C. In the event amendments to a site-specific development plan are approved, the effective date of such amendments, for purposes of duration of a vested property right, shall be the date of the approval of the original site-specific development plan, unless the Board of Trustees specifically finds to the contrary and incorporates such findings in its approval of the amendment.
- D. The approval of vested property rights shall be subject to all rights of referendum and judicial review; except that the period of time permitted by law for the exercise of such rights shall not begin to run until the date of publication of a notice to the general public of the site-specific development plan and creation of vested property rights. (Ord. 11-2007 §1)

7.02.5 Notice of Approval.

- A. Each plat or development agreement constituting a site-specific development plan shall contain the following notice:

Approval of this plan may create a vested property right pursuant to Article 68 of Title 24, C.R.S., as amended.
- B. Failure to contain this statement shall invalidate the creation of the vested property right. In addition, a notice describing generally the type and intensity of the use approved and the specific parcel or parcels of property affected and stating that a vested property right has been created shall be published once, not more than fourteen (14) days after approval of the site-specific development plan, in a newspaper of general circulation within the Town. Publication of the notice of creation of the vested property right shall be the obligation of the landowner. The Town shall have no obligation to see that the notice is properly published. (Ord. 11-2007 §1)

7.02.6 Duration of Vested Property Right. A property right which has been vested as provided herein shall remain vested for a period of three (3) years; except that the Board of Trustees may, in its sole discretion, grant vested property rights for a longer period when warranted in light of all relevant circumstances, including but not limited to the size and phasing of the development, economic cycles and market conditions. The vesting period shall not be extended by any

amendments to a site-specific development plan unless expressly authorized by the Board of Trustees in the chapter approving such amendments. (Ord. 11-2007 §1)

7.02.7 Other Provisions Unaffected. Approval of a site-specific development plan shall not constitute an exemption or waiver of any other provisions of this Code pertaining to the development or use of the property. (Ord. 11-2007 §1)

7.02.8 Payment of Costs. In addition to any and all other fees and charges imposed by this Code, the applicant for approval of a site-specific development plan shall pay all costs occasioned to the Town pertaining to such application, including but not limited to publication of notices, public hearing and review costs, county recording fees and review costs. (Ord. 11-2007 §1)

7.02.9 Limitations. Nothing in this chapter is intended to create any vested property right, but only to implement the provisions of Article 68 of Title 24, C.R.S. In the event of the repeal of said article or a judicial determination that said article is invalid or unconstitutional, this Article shall be deemed to be repealed and the provisions hereof no longer effective. (Ord. 11-2007 §1)

CHAPTER 8: FLOODPLAIN REGULATIONS

8.01 Purpose and Definitions

8.01.1 General purpose.

- A. It is the purpose of this Article to meet or exceed the minimum standards for floodplain regulations in accordance with the Federal Emergency Management Agency (FEMA) by provisions designed to:
1. Protect human life and health;
 2. Minimize expenditure of public money for costly flood control projects;
 3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 4. Minimize prolonged business interruptions;
 5. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
 6. Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
 7. Ensure that potential buyers are notified that property is in a flood area.

(Ord. No. 2-2014 , 1-14-14)

8.01.2 Applicability

- A. The Legislature of the State of Colorado has, in Title 29, Article 20 of the Colorado Revised Statutes delegated the responsibility to local governments to adopt regulations designed to minimize flood loss.
- B. Applicability. This Section shall apply to all areas of special flood hazard and areas removed from the flood plain by the issuance of a FEMA Letter of Map Revision Based on Fill (LOMR-F) within the jurisdiction of the Town.

8.01.3 Methods of reducing flood losses.

- A. In order to accomplish its purposes, this Article uses the following methods:
1. Restricting or prohibiting uses which are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
 2. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

3. Controlling the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters;
4. Controlling filling, grading, dredging and other development which may increase flood damage; and
5. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Ord. No. [2-2014](#), 1-14-14)

8.01.4 Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted so as to give them the meaning they have in common usage and to give this article its most reasonable application:

Alluvial fan flooding means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport and deposition; and unpredictable flow paths.

Apex means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

Area of shallow flooding means a designated AO, AH or VO zone on the community's Flood Insurance Rate Map (FIRM) with a one-percent chance or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood hazard means the land in the floodplain within the community subject to a one-percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AE, AH, AO, A1-99, VO, V1-30, VE or V.

Base flood means the flood having a one-percent chance of being equaled or exceeded in any given year.

Basement means any area of the building having its floor sub-grade (below ground level) on all sides.

Critical feature means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Development means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Elevated building means a non-basement building: (i) built, in the case of a building in Zones A, AE, AH, AO, A1-30, A99, B, C, D and X, to have the top of the elevated floor or, in the case of a building in Zones

V1-30, VE or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water; and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A, AE, AH, AO, A1-30, A99, B, C, D and X, elevated building also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters. In the case of Zones V1-30, VE or V, elevated building also includes a building otherwise meeting the definition of elevated building, even though the lower area is enclosed by means of breakaway walls if the breakaway walls met the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

Existing construction means, for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. Existing construction may also be referred to as existing structures.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads).

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- a. The overflow of inland or tidal waters, and/or
- b. The unusual and rapid accumulation or runoff of surface waters from any source.

Flood Insurance Rate Map or FIRM means an official map of the community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood insurance study means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles and water surface elevation of the base flood, as well as the Flood Boundary-Floodway Map.

Floodplain or flood-prone area means any land area susceptible to being inundated by water from any source (see definition of flooding).

Flood protection system means those physical structural works for which funds have been authorized, appropriated and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a special flood hazard and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain management regulations means this Chapter, Chapter 17 of this Code, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Flood-proofing means any combination of structural and nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway (regulatory floodway) means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

- a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

- c. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - i. By an approved state program as determined by the Secretary of the Interior; or
 - ii. Directly by the Secretary of the Interior in states without approved programs.

Levee means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

Levee system means a flood protection system which consists of a levee or levees and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirement of Section 60.3 of the National Flood Insurance Program regulations.

Manufactured home means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term manufactured home does not include a recreational vehicle.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

Mean sea level means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction means, for the purpose of determining insurance rates, structures for which the start of construction commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For flood-plain management purposes, new construction means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by the community and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed

(including at a minimum the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by the community.

Recreational vehicle means a vehicle which is:

- a. Built on a single chassis;
- b. Four hundred (400) square feet or less when measured at the largest horizontal projections;
- c. Designed to be self-propelled or permanently towable by a light-duty truck; and
- d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act [Pub. L. 97-348]) includes substantial improvement and means the date the building permit was issued, provided that the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structural damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Structure means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

Substantial improvement means any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before start of construction of the improvement. This includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

- a. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the Code Enforcement Officer and which are the minimum necessary conditions; or
- b. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Variance means a grant of relief to a person from the requirements of this Article when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this Article. (For full requirements, see Section 60.6 of the National Flood Insurance Program regulations.)

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4) or (e)(5) of the National Flood Insurance Program regulations is presumed to be in violation until such time as that documentation is provided.

Water surface elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(Ord. No. [2-2014](#), 1-14-14)

8.02 General Provisions

8.02.1 Basis for establishing areas of special flood hazard.

The areas of special flood hazard established by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for Larimer County, Colorado, and Incorporated Areas," dated February 6, 2013, with accompanying Flood Insurance Rate Maps and Flood Boundary-Floodway Maps (FIRM and FBFM), and any revisions thereto, are hereby adopted by reference and declared to be a part of this Article. The Flood Study and FIRM is on file at the Town Hall.

(Ord. No. [2-2014](#), 1-14-14)

8.02.2 Compliance.

No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Article and other applicable regulations.

(Ord. No. [2-2014](#), 1-14-14)

8.02.3 Sec. 16-10-140. - Abrogation and greater restrictions.

This Article is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Article and another Code provision, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ord. No. [2-2014](#), 1-14-14)

8.02.4 Interpretation.

A. In the interpretation and application of this Article, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the Town; and
3. Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. [2-2014](#), 1-14-14)

8.02.5 Warning and disclaimer of liability.

The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This Article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Article shall not create liability on the part of the Town, any officer or employee thereof for any flood damages that result from reliance on this Article or any administrative decision lawfully made thereunder.

(Ord. No. [2-2014](#), 1-14-14)

8.03 Administration

8.03.1 Floodplain Development Permit

A floodplain development permit shall be required to ensure conformance with the provisions of this Article.

8.03.2 Designation of Town official for administration.

The Town Planning Director is hereby appointed to administer and implement this Chapter by granting or denying development permit applications in accordance with its provisions and other appropriate sections of 44 C.F.R. (National Flood Insurance Program Regulations) pertaining to floodplain management.

(Ord. No. [2-2014](#), 1-14-14)

8.03.3 Duties and responsibilities of Floodplain Administrator.

A. Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

1. Maintain and hold open for public inspection all records pertaining to the provisions of this Article.

2. Review, approve, or deny all required floodplain development permit applications to determine whether the proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.
3. Review proposed development applications to assure that all necessary permits have been obtained from those federal state or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act amendments of 1972, 33 U.S.C. § 1334) from which prior approval is required.
4. Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation.
5. Notify, in riverine situations, adjacent communities and the Colorado Water Conservation Board, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
6. Assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained.
7. When base flood elevation has not been provided in accordance with Section 16-10-120 of this Article, obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source, in order to administer the provisions of this Chapter.
8. When a regulatory floodway has not been designated, require that no new construction, substantial improvements or other development, including fill, shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half (½) foot at any point within the community.

(Ord. No. [2-2014](#), 1-14-14)

8.03.4 Permit procedures.

A. The Town Clerk shall accept applications on forms including but not limited to the following information: plans in duplicate drawn to scale showing the location, dimensions and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:

1. Elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures;
2. Elevation in relation to mean sea level to which any nonresidential structure shall be floodproofed;
3. A certificate from a registered professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of **Section 16-10-120 above**;

4. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.
- B. Approval or denial of a development permit by the Town shall be based on all of the provisions of this Article and the following relevant factors:
1. The danger to life and property due to flooding or erosion damage;
 2. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 3. The danger that materials may be swept onto other lands to the injury of others;
 4. The compatibility of the proposed use with existing and anticipated development;
 5. The safety of access to the property in times of flood for ordinary and emergency vehicles;
 6. The costs of providing governmental services during and after flood conditions, including maintenance and repair of streets and bridges and public utilities and facilities such as sewer, gas, electrical and water systems;
 7. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;
 8. The necessity to the facility of a waterfront location, where applicable;
 9. The availability of alternative locations not subject to flooding or erosion damage for the proposed use; and
 10. The relationship of the proposed use to the Comprehensive Plan for that area.
- C. All variances shall follow the procedures set forth in Section 2.22
1. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
 2. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
 3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 4. Variances shall only be issued upon:
 - a. Showing a good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 - c. determination that the granting of a variance will not result in increased flood heights, additional threats to public safety or extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

5. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

(Ord. No. [2-2014](#), 1-14-14)

(Ord. No. [2-2014](#), 1-14-14)

(Ord. No. 2-2014, 1-14-14)

8.04 Standards for Flood Hazard Reduction

8.04.1 General standards for flood hazard reduction.

In all areas of special flood hazards, the following provisions are required for all new construction and substantial improvements:

- A. Anchoring. All new construction or substantial improvements shall be designed or modified and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
 1. All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors as follows:
 2. Over-the-top ties shall be provided at each of the four (4) corners of the manufactured home, with two (2) additional ties per side at intermediate locations, with manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side;
 3. Frame ties shall be provided at each corner of the home with five (5) additional ties per side at intermediate points, with manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side;
 4. All components of the anchoring system be capable of carrying a force of four thousand four hundred (4,400) pounds; and
 5. Any structural additions to the manufactured home shall be similarly anchored.
- B. Construction materials and methods.
 1. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
 2. All new construction or substantial improvements shall be constructed with materials resistant to flood damage.
 3. All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

C. Utilities.

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems;
2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and
3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

D. Subdivision proposals.

1. All subdivision proposals including the placement of manufactured home parks and subdivisions shall be consistent with this Chapter;
2. Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which is greater than fifty (50) lots or five (5) acres (whichever is less) if not otherwise provided pursuant to this Section.
3. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards; and
4. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities, such as sewer, gas, electrical and water systems, located and constructed to minimize or eliminate flood damage.

- E. Encroachments. In Zones AE and AH the cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one-half ($\frac{1}{2}$) foot at any point. In areas of special flood hazards, where base flood elevation data has not been provided, the cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one (1) foot at any point.

(Ord. No. [2-2014](#), 1-14-14)

8.04.2 Specific standards for flood hazard reduction.

- A. In all areas of special flood hazards where base flood elevation data has been provided as set forth herein, the following provisions are required:

1. *Residential construction.* New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), electrical, heating, ventilation, plumbing and air condition equipment and other service facilities (including ductwork) elevated a minimum of twelve (12) inches above the base flood elevation. A registered professional engineer, architect or land surveyor shall submit a certification to the Floodplain Administrator that the standard of this Subsection is satisfied.

2. *Nonresidential construction.* New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated a minimum of twelve (12) inches above the base flood level or, together with attendant utility and sanitary facilities, be designed so that, below the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this Subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator.
3. Enclosures, new construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:
 - a. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one (1) foot above grade.
 - c. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.
4. *Manufactured homes.*
 - a. All manufactured homes to be placed within Zone A on the Town's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
 - b. All manufactured homes that are placed or substantially improved within Zones A1-30, AH and AE on the Town's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as a result of a flood, shall be elevated on a permanent foundation such that the lowest floor of the

manufactured home is elevated a minimum of twelve (12) inches above the base flood elevation, and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movements.

- c. Manufactured homes that are placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1-30, AH and AE on the Town's FIRM that are not subject to the provisions of this Paragraph shall be elevated so that either:
 - i. The lowest floor of the manufactured home is a minimum of twelve (12) inches above the base flood elevation; or
 - ii. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and are securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
5. *Recreational vehicles.* Recreational vehicles that are placed on sites within Zones A1-30, AH and AE on the Town's FIRM shall either:
- a. Be on the site for fewer than one hundred eighty (180) consecutive days;
 - b. Be fully licensed and ready for highway use; or
 - c. Meet the permit requirements of Section 16-10-240 of this Article and the elevation and anchoring requirements for manufactured homes in Paragraph (4) above. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect types utilities and security devices and has no permanently attached additions.

(Ord. No. [2-2014](#), 1-14-14)

8.04.3 Standards for areas of shallow flooding (AO/AH Zones).

- A. Located within the Special Flood Hazard Area are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:
- 1. *Residential construction.* All new construction and Substantial Improvements of residential structures must have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one foot above the depth number specified in feet on the community's FIRM (at least three feet if no depth number is specified). Upon completion of the structure, the elevation of the lowest floor, including basement, shall be certified

by a registered Colorado Professional Engineer, architect, or land surveyor. Such certification shall be submitted to the Floodplain Administrator.

2. *Nonresidential construction.* With the exception of critical facilities, all new construction and Substantial Improvements of non-residential structures, must have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one foot above the depth number specified in feet on the community's FIRM (at least three feet if no depth number is specified), or together with attendant utility and sanitary facilities, be designed so that the structure is watertight to at least one foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy. A registered Colorado Professional Engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section are satisfied.

- B. Within Zones AH or AO, adequate drainage paths around structures on slopes are required to guide flood waters around and away from proposed structures.

(Ord. No. [2-2014](#), 1-14-14)

8.04.4 Floodways.

- A. Floodways are administrative limits and tools used to regulate existing and future floodplain development. The State of Colorado has adopted floodway standards that are more stringent than the FEMA minimum standard (see definition). Located within special flood hazard areas are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

1. Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed by a licensed Colorado Professional Engineer and in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a no-rise certification) in flood levels within the community during the occurrence of the base flood discharge.
2. Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a CLOMR and floodway revision through FEMA.

(Ord. No. [2-2014](#), 1-14-14)

8.04.5 Alteration of a watercourse.

- A. For all proposed developments that alter a watercourse within a special flood hazard area, the following standards apply:
1. Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition, and channel migration and properly mitigate potential problems through the project as well as upstream and downstream of any improvement activity. A detailed analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.
 2. Channelization and flow diversion projects shall evaluate the residual 100-year floodplain.
 3. Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable Federal, State and local floodplain rules, regulations and ordinances.
 4. Any stream alteration activity shall be designed and sealed by a registered Colorado Professional Engineer or Certified Professional Hydrologist.
 5. All activities within the regulatory floodplain shall meet all applicable Federal, State and Town floodplain requirements and regulations.
 6. Within the regulatory floodway, stream alteration activities shall not be constructed unless the project proponent demonstrates through a floodway analysis and report, sealed by a registered Colorado Professional Engineer, that there is not more than a 0.00-foot rise in the proposed conditions compared to existing conditions floodway resulting from the project, otherwise known as a no-rise certification, unless the community first applies for a CLOMR and floodway revision.
 7. Maintenance shall be required for any altered or relocated portions of watercourses so that the flood-carrying capacity is not diminished.

(Ord. No. [2-2014](#), 1-14-14)

8.04.6 Properties removed from the floodplain by fill.

- A. A floodplain development permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA Letter of Map Revision Based on Fill (LOMR-F), unless such new structure or addition complies with the following:
1. *Residential construction.* The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to one foot above the base flood elevation that existed prior to the placement of fill.
 2. *Nonresidential construction.* The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to one foot above the base flood elevation that existed prior to the placement of fill, or together with attendant utility and sanitary facilities be designed so that the structure or addition is watertight to at least one foot above the base flood level that existed prior to the placement of

fill with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

(Ord. No. [2-2014](#), 1-14-14)

8.04.7 Standards for critical facilities.

- A. A critical facility is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that if flooded may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood.
- B. Classification of critical facilities. It is the responsibility of the Town Board of Trustees to identify and confirm that specific structures in their community meet the following criteria:
- C. Critical facilities are classified under the following categories: (a) essential services; (b) hazardous materials; (c) at-risk populations; and (d) vital to restoring normal services.
- D. Essential services facilities include:
 - 1. Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and, emergency operation centers);
 - 2. Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures but excluding clinics, doctors' offices, and non-urgent care medical structures that do not provide these functions);
 - 3. Designated emergency shelters;
 - 4. Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio, and other emergency warning systems, but excluding towers, poles, lines, cables, and conduits);
 - 5. Public utility plant facilities for generation and distribution (hubs, treatment plants, substations and pumping stations for water, power and gas, but not including towers, poles, power lines, buried pipelines, transmission lines, distribution lines, and service lines); and
 - 6. Air transportation lifelines (airports (municipal and larger), helicopter pads and structures serving emergency functions, and associated infrastructure (aviation control towers, air traffic control centers, and emergency equipment aircraft hangars).
- E. Specific exemptions to this category include wastewater treatment plants (WWTP), non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances.
- F. Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the Town Board of Trustees that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year

floodplain or are compliant with the provisions of this Article, and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the Town Board of Trustees on an as-needed basis upon request.

- G. Hazardous materials facilities are comprised of facilities that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials and may include:
 - 1. Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing);
 - 2. Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials;
 - 3. Refineries;
 - 4. Hazardous waste storage and disposal sites; and
 - 5. Above ground gasoline or propane storage or sales centers.
- H. Facilities shall be determined to be critical facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a Material Safety Data Sheet (MSDS) on file for any chemicals stored or used in the work place, and the chemical(s) is stored in quantities equal to or greater than the threshold planning quantity (TPQ) for that chemical, then that facility shall be considered to be a Critical Facility. The TPQ for these chemicals is: either five hundred (500) pounds or the TPQ listed (whichever is lower) for the three hundred fifty-six (356) chemicals listed under 40 C.F.R. § 302 (2010), also known as Extremely Hazardous Substances (EHS); or 10,000 pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Colorado Department of Health and Environment. OSHA requirements for MSDS can be found in 29 C.F.R. § 1910 (2010). The Environmental Protection Agency (EPA) regulation "Designation, Reportable Quantities, and Notification," 40 C.F.R. § 302 (2010) and OSHA regulation "Occupational Safety and Health Standards," 29 C.F.R. § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation this ordinance, but exclude later amendments to or editions of the regulations.
- I. Specific exemptions to this category include:
 - 1. Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
 - 2. Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the local authority having jurisdiction by hazard assessment and certification by a qualified professional (as determined by the local jurisdiction having land use authority) that a release of the subject hazardous material does not pose a major threat to the public.
 - 3. Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.

- J. These exemptions shall not apply to buildings or other structures that also function as critical facilities under another category outlined in this Article.
1. At-risk population facilities include medical care, congregate care, and schools. These facilities consist of:
 - a. Elder care (nursing homes);
 - b. Congregate care serving twelve (12) or more individuals (day care and assisted living);
 - c. Public and private schools (pre-schools, K-12 schools), before-school and after-school care serving twelve (12) or more children);
 2. Facilities vital to restoring normal services including government operations. These facilities consist of:
 - a. Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);
 - b. Essential structures for public colleges and universities (dormitories, offices, and classrooms only).
- K. These facilities may be exempted if it is demonstrated to the Town Board of Trustees that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this ordinance, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the Town Board of Trustees on an as-needed basis upon request.
- L. *Protection of critical facilities.* All new and substantially improved critical facilities and new additions to critical facilities located within the special flood hazard area shall be regulated to a higher standard than structures not determined to be critical facilities. For the purposes of this Article, protection shall include one of the following:
1. Location outside the special flood hazard area; or
 2. Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two feet above the base flood elevation.
- M. Ingress and egress for new critical facilities. New critical facilities shall, when practicable as determined by the Town Board of Trustees, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

CHAPTER 9: DEFINITIONS

9.01 Measurements

9.01.1 Computation of Time.

- A. In computing a period of days, the first day and the last day are included.
- B. If the last day of any period is a Saturday, Sunday, or legal holiday, the period is extended to include the next day which is not a Saturday, Sunday, or legal holiday.
- C. If a number of months is to be computed by counting the months from a particular day, the period ends on the same numerical day in the concluding month as the day of the month from which the computation is begun, unless there are not that many days in the concluding month, in which case the period ends on the last day of that month.

9.01.2 Terminology.

- A. As used in this Code, words used in the singular include the plural and words used in the plural include the singular.
- B. The words "must," "shall" and "will" are mandatory; "may," "can," "should" and "might" are permissive.
- C. The word "lot" shall include the words "building site", "site", "parcel", "plot" or "tract".
- D. A "building" or "structure" includes any part thereof.
- E. Words used in the present tense include the future tense.

9.02 Defined Terms¹

The words and phrases used in this Code shall have the meanings defined below unless otherwise specifically provided or unless clearly required by the context. Questions of definition or wording usage are interpreted by the Director based on the context of their usage and the intention of the section of this Code in which they occur.

A

Accessory Building A subordinate building or structure, the use of which is customarily incidental to that of the main building or to the main use of the land, which is located on the same lot (or on a contiguous lot in the same ownership) with the main building or use.

Accessory Dwelling Unit An additional dwelling unit integrated within a single-family dwelling, or located in a detached accessory building, such as carriage houses or agricultural-type outbuildings, located on the same lot as single-family dwellings

¹ The list of defined terms will change through the draft commenting process. Please note where new definitions are needed or where revisions are necessary.

Accessory Use a subordinate use, clearly incidental and related to the main structure, building or use of land and located on the same lot (or on a contiguous lot in the same ownership) as that of the main structure, building or use.

Active repair is a term developed to differentiate between inoperable vehicles that are in the process of being made operable and those that are being stored without the benefit of ongoing repair or which are being stored for salvage purposes.

Adjacent means meeting or touching at some point or separated from a lot or parcel by one (1) of the following: a street, alley or other right-of-way, lake, stream or open space.

Adjacent property owner is an owner of record of any estate, right or interest in real property abutting and within three hundred (300) feet of the subject property.

Adult Entertainment Establishments (Sexually-Oriented Businesses) Any adult video or bookstore, adult cabaret, adult booth, adult modeling or display establishment, adult motel, or adult theater.

- (a) Adult booth. A separate enclosure within a structure featuring adult entertainment or adult material. The term adult booth does not include a restroom or a foyer through which any person can enter or exit the establishment.
- (b) Adult cabaret. An establishment that features adult entertainment.
- (c) Adult entertainment. Any modeling, posing, exhibition, display, or exposure, of any type, whether through book, pictures, film displays, live performance, dance, or modeling, that has as its dominant theme, or is distinguished or characterized by an emphasis on any one or more of the following:
 - (i) Any actual or simulated specified sexual activities,
 - (ii) Specified anatomical areas,
 - (iii) The removal of articles of clothing, or
 - (iv) Appearing nude or semi-nude.
- (d) Adult material. One or more of the following material that have as their primary or dominant theme matter depicting, illustrating, describing or relating to adult entertainment, regardless of whether it is new or used:
 - (i) Books, magazines, periodicals or other printed matter;
 - (ii) Photographs, films, motion pictures, video cassettes, slides, or other visual representations;
 - (iii) Recordings or other audio matter;
 - (iv) Instruments, novelties, devices or paraphernalia that are designed for use in connection with adult entertainment.
- (e) Adult modeling or display establishment: Any establishment whose employees engage in adult entertainment or adult private modeling.
- (f) Adult motel: Any motel, hotel, boarding house, rooming house, or other place temporary lodging that includes the word "adult" or "erotic" in any name it uses, or otherwise provides and advertises adult entertainment or adult material.
- (g) Adult private modeling: Modeling, posing, exhibition, display, or exposure by an employee relating to adult entertainment before a non-employee while the non-employee is in an area not accessible to all other persons in the establishment, or while the non-employee is in an area (whether totally or partially screened or partitioned) during that display from the view of all persons outside the area. The term private performance is considered private modeling.

- (h) **Adult theater:** An establishment consisting of an enclosed structure, or a portion or part of an enclosed structure, or an open-air area where a person may view adult material or adult entertainment. Generally, the adult material or adult entertainment is pre-recorded material.
- (i) **Adult video or bookstore:** An establishment that sells or rents adult material. Any establishment meeting all the following criteria is not considered an adult video or bookstore:
 - (i) The adult material is accessible only by employees.
 - (ii) The individual items of adult material offered for sale and/or rental comprise less than 10 percent of the individual items publicly displayed at the establishment as stock in trade in the following categories: videos, books, magazines, periodicals, other printed matter, slides, other visual representations, recordings, and other audio matter.
 - (iii) The establishment does not use the following terms in advertisements or other promotional activities relating to the adult materials: "XXX," "XX," "X," or any series of the letter "X" whether or not interspersed with other letters, figures, or characters; "erotic" or deviations of that work; "adult entertainment" or similar phrases; "sex" or "sexual acts" or similar phrases; "nude" or "nudies" or similar phrases; or any other letters, words, or phrases that promote the purchase or rental of adult material.

Agriculture The use of land for the production of plants and animals useful to humans, including, to a variable extent, the preparation of these products for human use and their disposal by marketing or otherwise, and includes horticulture, floriculture, viticulture, forestry, dairy, livestock, poultry, bee, and any and all forms of farm products and farm production. This includes accessory uses for treating or storing farm products and equipment. [See Section 35-1-102, C.R.S.]

Airport Any area of land or water which is used or intended for the landing and taking off of aircraft, and any appurtenant areas which are used or intended for use for airport buildings or other airport facilities or rights-of-way. This includes all necessary runways, taxiways, aircraft storage and tiedown areas, hangers, public terminal buildings and parking, helicopter pads, support activities such as airport operations and air traffic control, and other necessary buildings and open spaces. Includes dusting services. For purposes of this definition, "aircraft " means a device that is used or intended to be used for flight in the air, such as an airplane or helicopter.

Art Studio The workshop of an artist, writer, craftsperson, or photographer, but not a place where members of the public come to receive instruction on a more than incidental basis or to sit for photographic portraits.

Arterial street means a street which is anticipated to carry in excess of three thousand five hundred (3,500) vehicles per day in traffic volume, at desirable speeds ranging from thirty (30) to forty-five (45) miles per hour, and which is defined specifically as such on the Master Street Plan of the Town and is used for travel between areas within and outside the Town.

B

Banner means a temporary, generally flexible, sign applied on lightweight material, such as plastic or fabric of any kind, hung either with or without a frame.

Bar / Tavern an establishment providing or dispensing fermented malt beverages and/or malt, special malt, vinous or spirituous liquors, and in which the sale of food products such as sandwiches or light snacks, is secondary (also known as a tavern)

Bed and Breakfast An establishment operated in a private residence or portion thereof, which provides temporary accommodations to overnight guests for a fee and which is occupied by the operator of such establishment.

Billboard means a permanent, sign or sign structure attached on which a person places copy on a poster or panel mounted on a pole or metal structure that exceeds the maximum sign face area and height provided by this Code. Typically, a billboard has one of the following configurations: (1) wood posts or pole supports with dimensional

lumber as the secondary support (A-frame) with a wood or metal catwalk with display panels, (2) steel A-frame constructed with angle iron or steel supports with metal framing, catwalk, with display panels, (3) multi-mast structure constructed with steel poles, I-beam, or equivalent member as the primary support, with a catwalk, and display panels, or (4) monopole structure constructed with tubular steel support, tubular steel framing, metal catwalk and display panels with a concrete foundation.

Boarding and Rooming House A building or portion of which is used to accommodate, for compensation, four (4) or more boarders or roomers, not including members of the occupant's immediate family who might be occupying such building.

Brew Pub, Distillery Pub, or Limited Winery A "brew pub," "distillery pub," or "limited winery" as defined by Section 44-3-103, Colorado Revised Statutes, as amended.

Brewery, Distillery, or Winery A "brewery," "distillery," or "winery" as defined by Section 44-3-103, C.R.S., as amended. The facility is used primarily for the on-site manufacturing of malt liquors, which may include a tap room that is less than or equal to 30 percent of the facility's total floor area, including any outdoor seating or accessory sales areas. A "tap room" means a use associated with and on the same premises as a brewery, at which guests may consume and purchase, for on or off premise consumption, the manufacturer's products and other nonalcoholic beverages.

Building and Landscaping Materials Supply A business that sells and stores building materials or landscaping where the majority of sales are wholesale transactions to other firms. Outdoor storage and retail sales are incidental. **Building** means any permanent structure built for the shelter or enclosure of persons, animals, chattels or property of any kind, which is governed by the following characteristics:

- (a) Is permanently affixed to the land.
- (b) Has one (1) or more floors and a roof.

Building frontage means the horizontal, linear dimension of that side of a building, which abuts a street, a parking area, a mall or other circulation area open to the public and has either a main window display or a public entrance to the building.

Building height means the vertical distance measured from the established curb level to the highest point of the roof. Chimneys, spires, towers, elevator penthouses, tanks and similar projections, other than signs, shall not be included in calculating the height.

C

Car Wash A facility where the primary or secondary function is washing automobiles, pick-up trucks, and small vans, but not trailers or commercial trucks. This includes both mechanical production line methods or self-service equipment. A car wash may also function as an accessory use to an automobile service station or other primary use.

Cemetery Land used or intended to be used for the burial of the dead and dedicated for cemetery purposes, including mausoleums and mortuaries when operated in conjunction with and within the boundaries of such cemetery.

Child Care Center² A facility, by whatever name known, which is maintained for the whole or part of a day for the care of seven (7) or more children under the age of sixteen (16) years who are not related to the owner, operator or manager, whether such facility is operated with or without compensation for such care and with or without stated educational purposes, except that a child care center shall not include any of the following three (3) types of family care homes as defined by the State: family child care home, infant/toddler home or experienced family child care provider home. The term includes, but is not limited to, facilities commonly known as day care centers, day

² We will verify all definitions for childcares, daycares, in-home child care, and any other similar terms are tracking with recent changes in state statutes as we move forward with the revision process.

nurseries, nursery schools, preschools, play groups, day camps, summer camps, large child care homes as defined by the State, centers for developmentally disabled children and those facilities which give twenty-four-hour-per-day care for dependent and neglected children. Child care centers are also those facilities for children under the age of six (6) years with stated educational purposes which are operated in conjunction with a public, private or parochial college or a private or parochial school, except that the term shall not apply to a kindergarten maintained in connection with a public, private or parochial elementary school system of at least six (6) grades.

Civic Space Public or quasi-public uses in residential or business areas that are accessible to the public and primarily serve as gathering or meeting areas for the immediate community, or reserved as open space that provides a community amenity or promotes environmental or ecological functions. Civic spaces may be public buildings; defined space in residential, commercial, or mixed-use buildings; or outdoor space constructed to accommodate community gatherings. They can be the settings where celebrations are held, where social and economic exchanges take place, where friends run into each other, and where cultures mix. Civic spaces include active or passive recreational uses, nature and recreation trails, nature preserves (such as wildlife sanctuaries, conservation areas, and game preserves), cultural amenities (e.g. fountains, ice rinks, reflecting pools), open spaces, parks, squares, plazas, playgrounds, or memorial parks. This includes any of the following as defined below:

- (a) Active recreation: Recreational uses requiring constructed facilities for organized activities, such as playing fields, ball courts, and playgrounds.
- (b) Dog park: A park that provides a variety of recreational amenities for dogs and persons that may include benches, parking, restrooms, and water fountains. If dogs are to be unleashed, the area must be fenced.
- (c) Community space: Buildings or facilities that provide gathering places, such as community centers, property owner association meeting spaces, or clubhouses.
- (d) Open space: Areas of trees, shrubs, lawns, grass, pathways and other natural and man-made amenities not within individual building lots, set aside for the use and enjoyment of residents, visitors and other persons, unoccupied by buildings or facilities unless related to recreational activities. Generally, open space is intended to provide light and air and is designed for either scenic or recreational purposes. For the purpose of this Code, open space includes active recreation space, common open space, and dedicated open space.
- (e) Park or plaza: An open space which may be improved and landscaped; usually surrounded by streets and buildings.
- (f) Urban deck: A platform for landscaped greens or engineered to accommodate buildings, which spans over major roadways. The intent of an urban deck is to create and enable pedestrian movement across an otherwise, typically impenetrable barrier, and to provide space for activity that can link both sides of the roadway.
- (g) Wetlands mitigation bank: A natural resource management technique authorized by Part 404 of the Federal Clean Water Act, or other state or federal law, as applicable, using wetland preservation, restoration, creation and/or enhancement to offset or replace wetland functions that are lost due to development. Wetland mitigation banks are typically large areas of wetlands operated by private or public entities, which may sell credits to other entities to compensate for wetland loss or impact at development sites or enter into other similar arrangements.

Club / Lodge organizations of persons for special purposes or for the promulgation of sports, arts, literature, politics or other common goals, interests or activities, characterized by membership qualifications, dues or regular meetings, excluding clubs operated for profit and/or places of worship or assembly.

Code means the Municipal Code of the Town, including this Land Use Code.

Collector street means a street which is anticipated to carry from two thousand five hundred (2,500) to five thousand (5,000) vehicles per day in traffic volume at desirable speeds ranging from twenty-five (25) to thirty-five (35) miles per hour and which serves a collecting function by distributing traffic between local streets and arterial streets, thereby providing access to adjacent properties and linking neighborhoods with arterial streets.

College An institute of higher education that awards baccalaureate or higher degrees, which may include onsite student, faculty, and/or employee housing facilities.

Commercial Dry Cleaning Facility Establishments primarily engaged in supplying, on a rental or contract basis, laundered industrial work uniforms and related work clothing (such as protective (flame and heat resistant) and clean room apparel), dust control items (such as treated mops, rugs, mats, dust tool covers, and cloths), and shop or wiping towels. Also known as "industrial launderers."

Common open space shall have the same meaning as common open space in Section 24-67-103, C.R.S.

Communication Facility Uses and structures such as radio and television transmitting and receiving antennas, radar stations, and microwave towers.

Community Facility A place, structure, area, or other facility used to provide fraternal, cultural, social, educational, or recreational programs or activities. This includes swimming pools, tennis courts, and similar facilities of a homeowners association, open to the public or a designated part of the public, and which may be publicly or privately owned.

Comprehensive Master Plan or Comprehensive Plan means the Comprehensive Master Plan.

Contractor and Contractor Storage The offices and/or storage facilities for a specialized trade related to construction, electric, glass, painting and decorating, welding, water well drilling, sign making, or similar items. Includes storage yards (for equipment, materials [including sand, road-building aggregate or lumber], supplies and/or vehicles owned or rented by the establishment), roofing and sheet metal, fabrication of cabinetry and related millwork and carpentry, elevator maintenance and service, and venetian blind and metal awning fabrication and cleaning. Incidental sales of materials are included within this definition.

Convenience Store A retail store containing less than five thousand (5,000) square feet of gross floor area which sells everyday goods and services which may include, without limitation, ready-to-eat food products, groceries, over-the-counter drugs, and sundries.

Convenience Store, with fuel sales A retail store containing less than five thousand (5,000) square feet of gross floor area which sells everyday goods and services which may include, without limitation, ready-to-eat food products, groceries, over-the-counter drugs, and sundries. Fuel sales are allowed on site.

D

Deck means an exterior platform adjacent to the principal structure which may be covered by roof or uncovered, and has no walls other than an open hand rail in compliance with current building codes.

Dedicated land means land transferred to the Town by platting, title, deed, or other legal method approved by the Town Attorney.

Dedication means any grant by the owner of a right to use land for the public in general, involving a transfer of property rights and an acceptance of the dedicated property by the appropriate public agency.

Density means the overall average number of dwelling units located on the gross or net residential acreage (as applicable) contained within the development and calculated on a per-acre basis. Gross density is calculated by dividing the total number of units by the total acreage. Net density is calculated by dividing the [total number of units] by the [total acreage minus all publicly dedicated land].

Design standards includes the Town Standard Design Criteria and Standard Construction Standards, the Lot and Block Standards beginning at Section 16-3-110; Street Standards beginning at Section 16-3-130; Parking

Standards beginning at Section 16-3-150; Sidewalk and Path Standards beginning at Section 16-3-240; Park Standards beginning at Section 16-3-270; Landscape Design beginning at Section 16-3-330.

Developer means any person, partnership, joint venture, limited liability company, association or corporation who participates as owner, promoter, developer or sales agent in the planning, platting, development, promotion, sale or lease of a development.

Development means the carrying out of any building activity or mining operation, the making of any material change in the use or appearance of any structure or land or the dividing of land into two (2) or more parcels. When appropriate in context, development shall also mean the act of developing or to the result of development. Development shall also include:

- (a) Any construction, placement, reconstruction, alteration of the size or material change in the external appearance of a structure on land;
- (b) Any change in the intensity of use of land, such as an increase in the number of dwelling units in a structure or on a tract of land or a material increase in the intensity and impacts of the development;
- (c) Any change in the use of land or a structure;
- (d) Any alteration of a shore or bank of a river, stream, lake, pond, reservoir or wetland;
- (e) The commencement of drilling oil or gas wells, mining, stockpiling of fill materials, filling or excavation on a parcel of land;
- (f) The demolition of a structure;
- (g) The clearing of land as an adjunct of construction;
- (h) The deposit of refuse, solid or liquid waste or fill on a parcel of land;
- (i) The installation of landscaping within the public right-of-way, when installed in connection with the development of adjacent property; and
- (j) The construction of a roadway through or adjoining an area that qualifies for protection as a wildlife or natural area.

Development shall not include:

- (a) Work by a highway or road agency or railroad company for the maintenance or improvement of a road or railroad track, if the work is carried out on land within the boundaries of the right-of-way;
- (b) Work by any public utility for the purpose of inspecting, repairing, renewing or constructing, on established rights-of-way, any mains, pipes, cables, utility tunnels, power lines, towers, poles or the like; provided, however, that this exemption shall not include work by a public entity in constructing or enlarging mass transit or fixed guide way mass transit depots or terminals or any similar traffic-generating activity;
- (c) The maintenance, renewal, improvement or alteration of any structure, if the work affects only the interior or the color of the structure or the decoration of the exterior of the structure;
- (d) The use of any land for an agricultural activity;
- (e) A change in the ownership or form of ownership of any parcel or structure; or
- (f) The creation or termination of rights of access, easements, covenants concerning development of land or other rights in land.

Director means the director of the Planning Department and their designee.

Drive-thru facility means an establishment which, by design, physical facilities, services or packaging procedures, encourages or permits customers to receive services, obtain goods or be entertained while remaining in their motor vehicles.

Driveway means a constructed vehicular access serving one (1) or more properties and abutting a public or private road.

Dwelling means a building used exclusively for residential occupancy, including single-family dwellings, two-family dwellings and multi-family dwellings.

Dwelling unit means one (1) or more rooms and a single kitchen and at least one (1) bathroom, designed, occupied or intended for occupancy as separate quarters for the exclusive use of a single family for living, cooking and sanitary purposes, located in a single-family, two-family or multi-family dwelling or mixed-use building.

Dwelling, two-family or duplex means a building occupied by two (2) families living independently of each other.

E

Easement means a right to land generally established in a real estate deed or on a recorded plat to permit the use of land by the public, a corporation or particular persons for specified uses.

Eave means the overhanging lower edge of a roof.

Entertainment Facility a building or part of a building devoted to showing motion pictures or dramatic, musical or live performances, but does not include a sexually oriented business as defined in Article 11.

Excess-weight vehicle means any vehicle, excepting any vehicle owned by or in the control of any governmental authority, which weighs in excess of any adopted weight limit, the weight limit within the Town shall be ten thousand (10,000) pounds. Semi vehicles shall be defined and regulated by Chapter 8, Article 4 of this Code and if a vehicle or trailer falls within the definition of a semi-truck or semi-trailer as defined by Section 8-4-10 the semi-vehicle shall not be regulated as an excess-weight vehicle.

F

Family means an individual living alone, or either of the following groups living together in a single dwelling unit and share common living, sleeping, cooking and eating facilities:

- (a) Any number of persons related by blood, marriage, adoption, guardianship or other duly authorized custodial relationship, unless such number is otherwise specifically limited in this Code; or
- (b) Any unrelated group of persons consisting of (i) not more than four (4) persons; or (ii) not more than two (2) unrelated adults and their related children, if any.
- (c) And includes family foster care of up to four (4) children which is licensed according to the statutes of the state but does not include individuals living in a group home.

Financial Institution A business where the primary occupation is financial services such as banking, savings and loans, loan offices, and check cashing and currency exchange outlets. It does not include financial services that typically occur in an office or storefront, such as investment companies, loan companies, credit and mortgage, insurance services, or brokerage firms), which are classified under "Office," below.

Flag means a piece of durable fabric or other flexible material with distinctive colors and patterns mounted by attaching one side to a freestanding pole or a pole attached to a building.

Floodplain or flood hazard area. See Section 16-10-30 for definitions pertaining to floodplain regulations.

Floor area, also called **gross floor area**, means the total square footage of the building measured along the outside walls of the building and including each floor level, but not including open balconies, garages or other enclosed

automobile parking areas and basement storage areas and not including one-half (½) of all storage and display areas for durable goods.

Food Catering an establishment in which the principal use is the preparation of food and/or meals on the premises, and where such food and/or meals are delivered to another location for consumption or distribution, and where such use occupies not more than five thousand (5,000) square feet in gross floor area.

Foot-candle means a unit of measurement referring to illumination incident to a single point. One (1) foot-candle is equal to one (1) lumen uniformly distributed over an area of one (1) square foot.

Functional open space means open space which is large enough to serve a practical purpose, such as recreation, wildlife habitat or preservation of areas of agricultural, archeological or historical significance and shall exclude areas used for off-street parking, off-street loading, service driveways and setbacks from oil and gas wells or their appurtenances or other hazards to the public.

Funeral Services An establishment used primarily for human funeral services, which may or may not include facilities on the premises for embalming and, performing of autopsies or other surgical procedures. Examples include funeral homes, mortuaries, crematoriums, or columbarias.

G

Garage sale means a sale of personal belongings or household effects held on the seller's premises, usually in the garage or yard, and is a permitted accessory use in all residential districts, provided that:

- (a) No property may be offered for sale which has not been owned and used by the occupant of the premises or the co-participants in "neighborhood" garage sales. Neighborhood garage sales are allowed only if occupant of the premises receives no profit or commission from sale of other participant's property.
- (b) No garage sale shall be conducted for longer than three (3) days duration.
- (c) No more than three (3) garage sales are allowed annually at any premises.
- (d) Garage sales may be conducted during the daylight hours only.
- (e) Goods may not be stored outside during non-sale hours.

Golf Course A tract of land laid out with a course having nine or more holes for playing golf, including any accessory clubhouse, driving range, offices, restaurant, concession stand, picnic tables, pro shop, maintenance facilities, or similar accessory uses or structures.

Grade means:

- (a) The lowest point of elevation of the finished surface of the ground, paving or sidewalk within the area between the building and the property line, when the property line is more than five (5) feet from the building, between the building and a line five (5) feet from the building.
- (b) The degree of rise or descent of a sloping surface.

Grade, finished means the final elevation of the ground surface after development.

Grade, natural means the elevation of the ground surface in its natural state, before man-made alterations.

Greenhouse / Nursery Any land or structure used primarily to raise trees, shrubs, flowers or other plants for sale or for transplanting and may include the sale of nonliving landscape and decorating products.

Grocery Store a retail establishment primarily selling food, as well as other convenience and household goods, which occupies a space of not more than twenty-five thousand (25,000) square feet.

Group Home state-licensed facilities for developmentally disabled, handicapped, seniors or children as defined by and meeting the requirements of Section 31-23-303(2), C.R.S., or similar state statute.

Growth boundary means the growth boundaries established by the Comprehensive Master Plan.

H

Health and Membership Club an establishment that is open only to members and guests and that provides facilities for any of the following: aerobic exercises, running and jogging, exercise equipment, game courts and swimming facilities, and that also includes amenities such as spas, saunas, showers, and lockers.

Heavy Equipment Sales & Rental The sales and maintenance of heavy machinery. This includes establishments primarily engaged in sales, renting, or servicing machinery and equipment for use in business, agricultural, or industrial operations. These establishments typically cater to a business clientele and do not generally operate a retail-like or store-front facility. "Heavy machinery" includes office equipment, machinery tools, construction equipment, farm implements, excavation equipment, or transportation equipment.

Home Occupation an occupation or business activity which results in a product or service and is conducted in whole or in part in a dwelling unit and is subordinate to the residential use of the dwelling unit.

Hotel / Motel A building containing guest rooms in which lodging is provided, with or without meals, for compensation, and which is open to transient or permanent guests, or both. A hotel, motel, or resort only provides temporary lodging, and does not include multi-family or attached dwelling or any other form of permanent residence. Guests are prohibited from using a guest room or suite as a primary permanent residence.

I

Industrial and Manufacturing, Heavy Manufacturing of paper, chemicals, plastics, rubber, cosmetics, drugs, nonmetallic mineral products (such as concrete and concrete products, glass), primary metals, acetylene, cement, lime, gypsum or plaster-of-Paris, chlorine, corrosive acid or fertilizer, insecticides, disinfectants, poisons, explosives, paint, lacquer, varnish, petroleum products, coal products, plastic and synthetic resins, electrical equipment, appliances, batteries, and machinery. This group also includes asphalt mixing plants, concrete mixing plants, smelting, animal slaughtering, oil refining, and magazine contained explosives facilities.

Industrial and Manufacturing, Light Manufacturing of products, from extracted, raw, recycled or secondary materials, including bulk storage and handling of those products and materials, or crushing, treating, washing, and/or processing of materials. This includes similar establishments, and businesses of a similar and no more objectionable character. It also includes incidental finishing and storage. Goods or products manufactured or processed on-site may be sold at retail or wholesale on or off the premises. This does not include any activity listed under Industrial and Manufacturing, Heavy. Examples of general manufacturing include the manufacture or production of the following goods or products: apparel (including clothing, shoes, dressmaking); boats and transportation equipment; brooms; caskets; communication or computation equipment; dairy products; die-cut paperboard and cardboard; drugs, medicines, pharmaceutical; electrical equipment or machinery; farm machinery; fasteners and buttons; feed and grain; food/baking (including coffee roasting, creameries, ice cream, ice, frozen food, confectionery, and beverage); fruit and vegetable processing, canning and storage; gaskets; glass products made of purchased glass; household appliances; industrial controls; leather and allied products; lithographic and printing processes (including printing plants as defined below); mattresses; medical equipment and supplies; medicines; mill work and similar woodworking; mobile homes; musical instruments; novelties; office supplies; optical goods; photographic equipment; prefabricated and modular housing and components; printing and print supplies (including printing plants); 3-D printing, radio and TV receiving sets; sanitary paper products; scientific and precision instruments; service industry machines; signs; textiles (including dyeing, laundry bags, canvas products, dry goods, hosiery, millinery); tobacco products; toys, sporting and athletic goods; and watches and clocks. A "printing plant" means a facility devoted to printing or bookbinding, including related large-scale storage and transshipment.

Inflatable device means a temporary sign type where air inflates an object using a portable blower motor that provides a constant flow of air into the device. The device consists of flexible fabric, and rests on the ground or a structure equipped with the blower.

Infrastructure means those man-made structures which serve the common needs of the population, such as: potable water systems; wastewater disposal systems; solid waste disposal sites or retention areas; storm drainage systems; electric, gas or other utilities; bridges; roadways; bicycle paths or trails; pedestrian sidewalks, paths or trails; and transit stops.

J

Junk means scrap brass, iron, lead, tin, zinc; all other scrap metals and the alloys; bones; rags; used cloth, rope, rubber, tinfoil, bottles; old or used machinery of any type; used tools; used appliances; used lumber or crates; building materials; industrial equipment, fabrication of any material; used pipe or pipe fittings; used conduit or conduit fittings; used automobile parts; derelict vehicles, farm and heavy equipment construction vehicles; used tires and other manufactured goods that are so worn, deteriorated or obsolete as to make them unusable in their existing condition.

K

Kennel A facility licensed to house dogs, cats, or other household pets and/or where grooming, breeding, boarding or training or selling of animals is conducted as business.

L

Land Use Code means Chapters 16 and 17 of this Code (Sections 16-1-10 et seq. and 17-1-10 et seq.).

Landowner means any owner of a legal or equitable interest in real property and includes the heirs, successors, and assignees of such ownership interests.

Landscaping means any combination of living plants, such as trees, shrubs, plants, vegetative ground cover or turf grasses, and may include structural features such as walkways, fences, benches, works of art, reflective pools, fountains or the like. Landscaping shall also include irrigation systems, mulches, topsoil use, soil preparation, re-vegetation or the preservation, protection and replacement of existing trees.

Livestock includes horses, cattle, sheep and llamas, but does not include swine, chickens, goats, roosters, fowl, peacocks, guinea hens or other animals not allowed to be maintained within the Town by this Code (except that swine, chickens, goats, roosters, fowl, peacocks or guinea hens may be permitted with the Board of Trustees' approval in isolated circumstances, including for 4-H-type projects that do not unreasonably impact neighbors).

Local street means a street which is anticipated to carry under two thousand five hundred (2,500) vehicle trips per day in traffic volume at desirable speeds of up to twenty-five (25) miles per hour, and which provides access to abutting property and primarily serves local traffic.

Long-term care facility means any of the following:

- (a) Convalescent center means a health institution that is planned, organized, operated and maintained to offer facilities and services to in-patients requiring restorative care and treatment and that is either an integral patient care unit of a general hospital or a facility physically separated from, but maintaining an affiliation with, all services in a general hospital.
- (b) Nursing care facility means a health institution planned, organized, operated and maintained to provide facilities and health services with related social care to in-patients who require regular medical care and twenty-four-hour-per-day nursing services for illness, injury or disability. Each patient shall be under the care of a physician licensed to practice medicine in the State. The nursing services shall be organized and maintained to provide twenty-four-hour-per-day nursing services under the direction of a registered professional nurse employed full time.

- (c) Intermediate health care facility means a health-related institution planned, organized, operated and maintained to provide facilities and services which are supportive, restorative or preventive in nature, with related social care, to individuals who because of a physical or mental condition, or both, require care in an institutional environment but who do not have an illness, injury or disability for which regular medical care and twenty-four-hour-per-day nursing services are required.

Lot means a designated parcel, tract or area of land established by plat or subdivision of at least a sufficient size to meet minimum requirements for use, street frontage coverage and area and to provide required yards and other open spaces in the zoning district in which the lot is located, and which has direct access onto a public or private street.

Lot depth means the average distance between the front lot line and the rear lot line.

Lot, double frontage means a lot which fronts on one (1) public street and backs on another.

Lot, flag means a lot so shaped and designed that the main building site area is set back from the street on which it fronts and includes an access strip connecting the main building site with the frontage street.

Lot line, front means the property line dividing a lot from a street. On a corner lot, only one (1) street line shall be considered as a front line, and the shorter street frontage shall be considered the front line.

Lot line, rear means the line opposite the front lot line.

Lot line, side means any lot lines other than the front lot line or rear lot line.

Lot, reverse corner means a corner lot having its side street line substantially a continuation of the front lot line of the first lot to its rear.

Lot size means the total horizontal area within the lot lines of a lot; synonymous with area of lot.

Lot width means the distance parallel to the front lot line, measured at the front building setback line. Lot width on a curving front lot line means the distance parallel to the tangent of the front lot line at the building setback line. The lot width and the lot frontage may have different lengths on an irregularly shaped lot as they are measured at different points on the lot.

Luminaire means the complete lighting unit, including the lamp, the fixture, and other parts.

M

Manufactured Home A single-family dwelling which is partially or entirely manufactured in a factory; which is not less than twenty-four (24) feet in width and thirty-six (36) feet in length; which is installed on an engineered permanent foundation; which has brick, wood or cosmetically equivalent siding extending to the ground level; which has a pitched roof; which has the delivery system including wheels, tires, axles and tongue hitch removed; and which is certified pursuant to the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. 5401 et seq., as amended.

Manufacturing means a business which makes products by hand or by machinery.

Medical Care Facility An establishment, whether or not licensed or required to be licensed by the State Board of Health or the State Hospital Board, by or in which facilities are maintained, furnished, conducted, operated, or offered to prevent, diagnose, or treat human disease, pain, injury, deformity, or physical condition, whether medical or surgical, of two or more non-related mentally or physically sick or injured persons; or for the care of two or more non-related persons requiring or receiving medical, surgical, or nursing attention or service as acute, chronic, convalescent, aged, or physically disabled. This use includes an intermediate care facility, mental retardation facility, outpatient surgery center, birthing facility, diagnostic imaging facility, radiation therapy facility, dialysis facility, medical/physical rehabilitation and trauma unit, or related institution or facility that offers treatment on an outpatient basis. This use may be operated for profit or nonprofit, privately owned, or operated by a local government unit.

This use includes any hospital, defined as any licensed and State of Colorado accredited health care institution with an organized medical and professional staff and with inpatient beds available around-the-clock, whose primary function is to provide inpatient medical, nursing, and other health-related services to patients for both surgical and nonsurgical conditions and that usually provides some outpatient services (such as emergency care).

Medical Office A facility operated by one (1) or more duly licensed members of the human health care professions, including but not limited to physicians, dentists, chiropractors, psychiatrists and osteopaths, where patients are not lodged overnight but are admitted for examination and/or treatment.

Mini-Storage Facility A facility containing separate, individual, private storage spaces, which may be of various sizes and which are rented pursuant to individual leases for varying periods of time.

Mixed use means the development of a lot, tract or parcel of land, building or structure with two (2) or more different uses, including but not limited to residential, office, retail, public uses, personal service or entertainment uses, designed, planned and constructed as a unit.

Mixed-Use Dwelling Multi-Family Dwelling units contained within a mixed-use building attached above the building's nonresidential uses (the mixed-use building may contain office or commercial uses below the residential use).

Motor Vehicle Dealership A facility for the sale or rental of automobiles, motorcycles, ATVs, boats, or recreational vehicles. This includes incidental vehicular services and repairs.

Motor Vehicle Repair, Heavy An establishment that offers mechanical and body work on motor vehicles including straightening of body parts, body repairs, battery rebuilding, painting, welding, short term storage of automobiles not in operating condition, outdoor similar work on motor vehicles that may involve noise, glare, fumes, smoke, or similar impacts.

Motor Vehicle Repair, Light An establishment that offers only general maintenance activities including engine tune-ups, lubrication, carburetor cleaning, brake repair, car washing, detailing, polishing, replacement of filters, fluids, light bulbs, belts, fuses, oil, and tires, emissions testing, and similar activities.

Motor Vehicle Storage

Multi-Family Dwelling A dwelling contained in a structure also containing other dwellings in which each unit is attached to another at one or more party walls and at either the floor or the ceiling. This includes apartments and manor style apartments. This does not include townhomes or duplexes, which are considered single-family attached dwellings.

Multitenant building or development means a building or series of buildings on a parcel or several parcels under common ownership, management, and control and whose occupants are distinct users that each occupy a portion of the multitenant building or development.

N

Nightclub A bar or similar nonalcoholic establishment containing more than one hundred (100) square feet of dance floor area.

NIT means a unit of illuminative brightness equal to one candle per square meter, measured perpendicular to the rays of the source.

Nonconforming building means a building or structure, or portion thereof, that does not conform to the regulations of this Land Use Code, but that was lawfully constructed under the regulations in force at the time of construction.

Nonconforming use means a use that does not conform to the use regulations of this Land Use Code, but that was lawfully established under the regulations in force at the time the use was established and has been in regular use since that time.

O

Off-street parking area means all off-street areas and spaces designed, used, required or intended to be used for the parking, storage, maintenance, service, repair, display or operation of motor vehicles, including driveways or access ways in and to such areas and circulation aisles throughout such areas, but not including approved outdoor storage areas as defined herein or public streets and rights-of-way.

Off-Street Parking Facility An enclosed structure (other than a private garage) or open, hard surfaced area (other than a public street or private road), designed, arranged, and made available for parking vehicles, where such use is operated as a business enterprise with a service charge or fee being paid by the vehicle operator. An off-street parking facility shall include, but not be limited to, a commercial parking lot and public garage.

Open space means any land or water area with its surface open to the sky, which serves specific uses of providing park and recreation opportunities, conserving natural areas and environmental resources, structuring urban development form and protecting areas of agricultural, archeological or historical significance. Open space shall not be considered synonymous with vacant or unused land but serves important urban functions. Usable open space shall exclude areas used for off-street parking, off-street loading, service driveways and setbacks from oil and gas wells and their appurtenances or other hazards to the public.

Open-Air Farmers' Markets An occasional or periodic market held in an open area or in a structure where groups of individual sellers offer for sale to the public such items as fresh produce, seasonal fruits, fresh flowers, arts and crafts items and food and beverages (but not to include second-hand goods) dispensed from booths located on-site.

Outdoor Display means the arrangement of merchandise, goods, and materials outside of the building or structure for direct sale to the customer.

Outdoor Storage means the keeping, in an unenclosed area, of any equipment, goods, junk, material, merchandise or vehicles, including boats, RV's and trailers, in the same place for more than 24 hours.

Outlot means a measured piece of land contained within subdivided land that is not a building lot. An outlot may be conveyed to the public for open space or other public purposes, be retained by the developer for later subdivision or be conveyed to an owner's association.

P

Park means an area open to the general public and reserved for recreational, educational or scenic purposes.

Parking garage means an off-street parking area within a building.

Parking lot means any off-street parking area as defined herein.

Patio cover means a cover of any material over an exterior surface that has no walls.

Pawn Shop Any business that loans money on deposit of personal property or deals in the purchase or possession of personal property on condition of selling that property back to the pledger or depositor, or loans or advances money on personal property by taking chattel mortgage security on it, and takes or receives that personal property and issues a lien upon the personal property. Pawn shops include payday loan lenders and alike uses.

Personal Services shops primarily engaged in providing services generally involving the care of the person or such person's apparel, or rendering services to business establishments such as laundry or dry-cleaning retail outlets, portrait/photographic studios, beauty or barber shops, employment service, or mailing or copy shops.

Plat means a map of certain described land prepared in accordance with the requirements of this Code and Section 38-51-106, C.R.S., as an instrument for recording of real estate interests with the County Clerk and Recorder.

Principal use means the main use of land or of a structure as distinguished from a subordinate or accessory use.

Print Shop an establishment in which the principal business consists of duplicating and printing services using photocopy, blueprint or offset printing equipment and may include the collating of booklets and reports.

Private property rights means the rights of a property owner within the Town to use his or her property within the legal parameters set forth in this Code and subject to applicable state, federal and constitutional law. Nothing herein guarantees any private property rights to develop in a particular manner except pursuant to a valid vested right.

Professional Office An office for professionals, such as physicians, dentists, lawyers, architects, financiers, engineers, artists, musicians, designers, teachers, accountants and others who, through training, are qualified to perform services of a professional nature and where no storage or sale of merchandise exists, except as accessory to the professional services.

Proof of ownership means ownership as specified in a current title insurance commitment or policy, or certification of title, issued by a title insurance company licensed by the State.

Property line means the boundary of any lot, parcel or tract as the same is described in the conveyance of such property to the owner; and does not include the streets or alleys upon which said lot, parcel or tract abuts.

Property means all real property subject to land use regulation by the Town.

Public areas means streets, parks, open spaces and other property designated or described as for public use on a map or plat of the Town and fee title is vested in the Town, other public body or a special district as defined in Section 32-1-103, C.R.S.

Public Facilities Those constructed facilities, including but not limited to transportation systems or facilities, water systems or facilities, wastewater systems or facilities, storm drainage systems or facilities, fire, police and emergency systems or facilities, electric, gas, telecommunication utilities or facilities and publicly owned buildings or facilities.

Public hearing means a meeting called by a public body for which public notice has been given and which is held in a place at which the general public may attend to hear issues and to express their opinions.

Public improvement means any drainage ditch, roadway, parkway, sidewalk, pedestrian way, tree, lawn, landscaped open space, off-street parking area, lot improvement or other facility which benefits the public.

Public open space means an open space area conveyed or otherwise dedicated to the Town, State or County or other public body for recreational or conservation uses. Public open spaces are to be unencumbered by oil and gas wells, their appurtenances or other hazards to the public.

Public use means uses which are owned by and operated for the public by the Town, county, state or federal governments or by school districts.

Public utility means a common carrier supplying electricity, wire telephone service, natural gas, water, wastewater or stormwater service or similar public services, but shall not include railroads or other forms of rail mass transit or depots or terminals supporting the same, or wireless telecommunication facilities.

Q

Quasi-public means having the nature or characteristics of being public but owned by a private or not-for-profit entity.

R

Raw water means water rights acceptable to the Town for domestic purposes, or water rights acceptable to the Town that may be used for irrigation of public facilities.

Reader board, electronic, means a sign or part of a sign capable of displaying content or visual displays that a sign user can electronically or mechanically change by remote or automatic means.

Reader board, manual, means a sign that serves as a display for characters, letters, or illustrations that a sign user can manually change or rearrange without altering the face or surface of the sign.

Recreational Entertainment, Indoor A place where recreation activities occur completely within an enclosed structure, including but not limited to bowling alleys, skating rinks, pool halls, video and pinball parlors.

Recreational Entertainment, Outdoor A place with outdoor activities, including but not limited to miniature golf, batting cages, water slides, skateboard parks, driving ranges and go-cart tracks.

Recreational vehicle (RV). Definitions pertaining to recreational vehicles and recreational vehicle parks are contained in Section 16-9-10 of this Code.

Recycling Facility A facility used for the collection and/or processing of recyclable material. Processing means the preparation of material for efficient shipment by such means as baling, compacting, flattening, grinding, crushing, mechanical sorting or cleaning. Such a facility, if entirely enclosed within a building or buildings, shall be considered a warehouse.

Religious Land Use A structure or group of structures intended for regular gatherings of people to attend, participate in or conduct religious services and other related activities and associated accessory uses. Associated accessory uses may include religious instruction classrooms, church offices, counseling programs, private school, youth programs, parking, child and adult day care facilities, summer camps, recreational facilities, caretaker's quarters, food bank, thrift shop, sale of religious items, and cemeteries.

Research and Development A facility (such as a laboratory) for general research, scientific research, development and/or training where assembly, integration, and testing of products in a completely enclosed building is incidental to the principal use of scientific research, development, and training.

Resource Extraction Any facility, land, or portion thereof, removal or recovery by any means whatsoever of sand, gravel, soil, rock, minerals, mineral substances or organic substances, other than vegetation, from water or land on or beneath the surface thereof, exposed or submerged.

Restaurant, fast food with drive-thru means any Restaurant, fast food establishment in which the principal business is the sale of foods and beverages to the customer in a ready-to-consume state and in which the design or principal method of operation of all or any portion of the business is to allow food or beverages to be served directly to the customer in a motor vehicle without the need for the customer to exit the motor vehicle.

Restaurant, fast food means any establishment in which the principal business is the sale of food and beverages to the customer in a ready-to-consume state, and in which the design or principal method of operation includes the following characteristics:

- (a) Food and beverages are usually served in paper, plastic or other disposable containers; and
- (b) The consumption of food and beverages is encouraged or permitted within the restaurant building, within a motor vehicle parked upon the premises or at other facilities on the premises outside the restaurant building or for carryout.

Restaurant, sit-down means any establishment in which the principal business is the sale of food and beverages to customers in a ready-to-consume state; where fermented malt beverages and/or malt, special malt or vinous and spirituous liquors may be produced on the premises as an accessory use; and where the design or principal method of operation includes one (1) or both of the following characteristics:

- (a) Customers are served their food and/or beverages by a restaurant employee at the same table or counter at which the items are consumed; or
- (b) Customers are served their food and/or beverages by means of a cafeteria-type operation where the food or beverages are consumed within the restaurant building.

Retail Store A shop or store that, as its primary business, sells new merchandise to the public. Examples include drugstores and discount department stores, and stores that sell apparel, home improvement/furnishings, toys, electronics or sporting goods.

Retention basin means a pond, pool or basin used for permanent storage of water runoff.

Right-of-way means a strip of land occupied or intended to be occupied by a street, crosswalk, railroad, road, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer main or for another special use. The usage of the term right-of-way for land platting purposes means that every right-of-way established and shown on a final plat is to be separate and distinct from the lots or parcels adjoining such right-of-way and not included within the dimensions of such lots or parcels. Rights-of-way intended for streets, crosswalks, water mains, sanitary sewers, storm drains or any other use involving maintenance by a public agency shall be dedicated to public use on the plat on which such right-of-way is established.

S

Salvage Yard A facility used to store used appliances, scrapped glass, rags, paper, metals, automotive parts, or equipment, regardless of whether used for remanufacture, resale or recycling.

School A public or private educational facility offering instruction at the elementary, junior, and/or senior high school levels in the branches of learning and study required to be taught in the schools of Colorado.

Service Station Any building, land area, premises or portion thereof, where gasoline or other petroleum products or fuels are sold and light maintenance activities, such as engine tune-ups, lubrication, minor repairs and carburetor cleaning, may be conducted. A service station shall not include premises where heavy automobile maintenance activities, such as engine overhaul, automobile painting and body fender work, are conducted.

Setback means the required open space unoccupied and unobstructed between the nearest projection of a structure and the property line of the lot on which the structure is located, with the exception of eaves which may project a maximum of eighteen (18) inches into the setback.

Setback, front yard means the setback distance a building or structure must be placed from the front lot line.

Setback, rear yard means the setback distance a building or structure must be placed from the rear lot line.

Setback, side yard means the setback distance a building or structure must be placed from the side lot line.

Shielding means when the light emitted from the fixture is projected below a horizontal plane running through the lowest point of the fixture where light is emitted.

Sight distance triangle means the area at the four (4) corners of an intersection that is to be kept free of shrubs, ground cover, berms, fences, structures or other materials or items greater than thirty (30) inches in height. Trees shall not be planted in the triangular area. The size of the sight distance triangles is determined as follows: at the intersection of any two (2) streets or where a street intersects with an alley, a triangle measuring thirty (30) feet along each curb or edge of roadway from their point of intersection, the third side being a diagonal line connecting the first two (2).

Sign copy means words, numbers, symbols, images, icons, letters, numerals, figures, characters other symbolic representations displayed on or by a sign.

Sign means a visual display of an object or device that includes elements such as colors, lights, motion, symbols, images, icons, letters, numerals, figures, characters, or combines any of those elements, that a person intends to communicate, advertise, identify, announce, direct, inform, or attract attention, and that a viewer can see and comprehend from a public right-of-way. The term "sign" includes a structure used to support or display a sign.

Sign user means a person who constructs, installs, operates, displays, or uses a sign. Sign user includes the owner of the lot serving as the sign's location, the owner of the sign or support structure, a person who installs or constructs a sign, and a person whose message a sign displays.

Sign, A-frame, means a temporary, portable, freestanding sign in the shape of the letter "A" with back-to-back sign faces, an easel, or a similar configuration.

Sign, attached (wall sign) means a permanent, attached sign, fastened to or affixed on an exterior wall of a building or other structure so that the wall becomes the supporting structure for, or forms the background surface of, the sign.

Sign, feather means a temporary banner in the shape of a feather, quill, sail, blade, or teardrop mounted on a solid or flexible pole or cord. Sometimes referred to as "quill signs" or "sail banners."

Sign, flashing means an internally or externally illuminated sign with an intermittent, blinking, alternating, or flashing light source.

Sign, freestanding means a structure, device, or object that is structurally independent of a building, anchored firmly to or below the ground surface, and that is a sign itself or is the support structure for a sign.

Sign, illuminated means any sign whose design or installation incorporates artificial light, including direct illumination, halo illumination, indirect illumination, or internal illumination.

Sign, moving means a sign or part of a sign that changes physical position by any movement or rotation. "Movement" includes any visible moving, revolving, or rotating parts or visible mechanical movement, or any apparent visible movement achieved by electrical, electronic, or mechanical means.

Sign, painted wall means a hand-produced work in which paint is applied directly on an exterior wall of a building or structure.

Sign, permanent means a sign constructed from durable materials affixed to a building, a structure, or the ground so that the sign resists environmental loads, such as wind, and that precludes ready removal or movement of the sign.

Sign, primary means a permanent freestanding or attached sign that serves as the principal sign for the lot.

Sign, secondary means a small permanent sign that is freestanding or attached to a building that is in addition to the primary sign types for the property and that has a height and scale that is subordinate to the primary sign types allowed for the property.

Sign, stake means a temporary, rigid sign constructed of plastic, vinyl, metal, or wood implanted in the ground by a stake or stakes.

Sign, temporary means a sign constructed of cloth, canvas, light fabric, cardboard, wood, wallboard, metal, or other light materials, with or without frames, which is intended for use for a limited period of time only.

Sign, subdivision entrance means a type of permanent freestanding sign located at the entrance to a subdivision in a residential district or a distinct phase of a subdivision in a residential district.

Sign, window means a temporary or permanent sign posted, painted, placed, or affixed to a window or glass door.

Single-Family Attached Dwelling A dwelling contained in a structure that shares party walls with another dwelling. This includes duplexes and townhomes.

Single-Family Detached Dwelling A single-family dwelling (a building designed exclusively for occupancy by one (1) family) which is not attached to any other dwelling or building by any means, excluding mobile homes and manufactured housing situated on a permanent foundation.

Site plan means a scale drawing of a lot, showing the actual measurements, the size and location of any existing or proposed buildings, the location of the lot in relation to abutting streets and other details such as parking areas, access points, landscaped areas, building areas, setbacks from lot lines, building heights, floor areas, densities, utility locations and easements.

Site specific development plan means the final plat of a subdivision or final development plan of a PUD (Planned Unit Development) when approved by the Board of Trustees pursuant to this Code.

Solid Waste Facility A facility where non-hazardous wastes are taken from collection vehicles, temporarily stored, and ultimately relocated to a permanent disposal site. This includes any facility, incinerator, landfill, materials recovery facility, municipal solid waste landfill, private or public solid waste management facility, recovered materials processing facility, sanitary landfill, or solid waste management facility.

Stable A facility that keeps or boards horses owned for the private use of the owners and/or residents of the property. This also includes horses owned by non-owners or non-residents of the property for private use. Accessory uses are permitted and include but are not limited to offices, storage areas, caretaker's quarters, educating and training in equitation, and caring for, breeding, or training horses associated with the Stable use.

Street means a public way (whether publicly or privately owned) used or intended to be used for carrying vehicular, bicycle and pedestrian traffic, and shall include the entire area within the public right-of-way and/or public access easement.

Streetscape means the distinguishing character of a particular street, within the public right-of-way, including paved materials and the adjacent space extending along both sides of a street, including landscaping, sidewalks, medians, lighting, street furniture and signage.

Structure means a combination of materials to form a construction for use, occupancy or ornamentation, whether installed on, above or below the surface of land or water.

Subdivider or developer means any person, partnership, joint venture, limited liability company, association or corporation who participates as owner, promoter, developer or sales agent in the planning, platting, development, promotion, sale or lease of a development.

Subdivision means the platting of a lot or the division of a lot, tract or parcel of land into two (2) or more lots, plots or sites.

T

Technical School A nonacademic establishment such as a trade school, where instruction is offered in secretarial, computer and data processing, drafting, electronic repair including radio/TV repair, commercial art, allied health care, real estate, banking, restaurant operation, or similar trades, or vocational training such as automobile body and engine repair, construction equipment operation, building trades, truck driving, and mechanical and electrical equipment/appliance repair.

Tenant means a distinct user that occupies a portion of a multi-tenant building, lot, or development, regardless of the legal arrangement allowing occupancy between the owner of the building, lot, or development and the user.

Title commitment means formal documentation from a title company listing the name of the owner of the property under consideration, the legal description of the property and any legal holdings on the property, such as easements, rights-of-way or liens.

Tourist Facilities An establishment set up to primarily provide local tourist information to visitors.

Town Comprehensive Plan means the plan, which was adopted by the Planning Commission and Board of Trustees in accordance with Section 31-23-206, C.R.S., to guide the future growth, protection and development of the Town, affording adequate facilities for housing, transportation, comfort, convenience, public health, safety and general welfare of its population.

Town means the Town of Wellington, a municipal corporation of the State, in its present incorporated form or in any later reorganized, consolidated, enlarged or reincorporated form.

Traffic control device means a sign, signal, marking, or other device used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, private road open to public travel, pedestrian facility, or shared-use path by authority of a public agency or official having jurisdiction, or, in the case of a private road open to public travel, by authority of the private owner or private official having jurisdiction as controlled by the Federal Highway Administration's Manual on Uniform Traffic Control Devices.

Transit Facilities Includes transit or bus shelters, bus terminals, stations, and associated right-of-way. A "transit shelter" means a roofed structure on or adjacent to the right-of-way of a street, which is designed and used primarily for the protection and convenience of bus passengers. Includes accessory vehicle and bicycle parking.

U

Uplighting means lighting that is directed in such a manner as to shine light rays above the horizontal plane.

V

Vested property rights means the right to undertake and complete the development and use of the property under the terms and conditions of a site-specific development plan.

Veterinary Facilities, Large animals Any facility which is maintained by or for the use of a licensed veterinarian in the diagnosis, treatment, or prevention of animal diseases.

Veterinary Facilities, Small animals Any facility maintained by or for the use of a licensed veterinarian in the diagnosis, treatment or prevention of animal diseases wherein the animals are limited to dogs, cats or other comparable household pets and wherein the overnight care of said animals is prohibited except when necessary in the medical treatment of the animal.

W

Warehouse, distribution and wholesale The storage of goods, and the sale of goods to other firms for resale, including activities involving significant storage and movement of products or equipment. This use does not involve manufacturing or production. Examples include:

- (a) Carting,
- (b) cold storage,
- (c) distribution facilities (as defined below),
- (d) dry goods wholesale,
- (e) express crating,
- (f) hauling,
- (g) feed locker plants,
- (h) fulfillment centers that combine storage with call centers,
- (i) hardware storage,
- (j) merchant wholesalers (such as restaurant supply sales),
- (k) warehouse or produce/fruit/food storage and wholesale structures,
- (l) wholesale sale of paper supplies, shoes, sporting goods, professional and commercial equipment and supplies, and otherwise preparing goods for transportation.

A "distribution facility" means the intake of goods and merchandise, individually or in bulk, the short-term holding or storage of such goods or merchandise, and/or the breaking up into lots or parcels and subsequent shipment off - site of such goods and merchandise. Distribution may be provided to an entity with an identity of interest with the distribution facility or to businesses and individuals unrelated to the distributor. The term "Distribution Facility" also includes a transshipment facility for the temporary holding, storage and shipment of goods or vehicles.

Warehousing means a business which stores or stocks merchandise or commodities.

Window means an opening constructed in an exterior which admits light or air to a building or structure, is framed and spanned with glass, and which may be mounted to permit opening and closing.

Wireless telecommunication equipment means any equipment used to provide wireless telecommunication service, but which is not affixed to or contained within a wireless telecommunication service facility, but is instead affixed to or mounted on an existing building or structure that is used for some other purpose.

Wireless telecommunication services means services providing for the transmission of wireless communications utilizing frequencies authorized by the Federal Communications Commission for paging systems, enhanced specialized wireless telecommunication, personal communication services or cellular telephone.

Wireless Telecommunications Facility Any freestanding facility, building, pole, tower or structure used to provide only wireless telecommunication services, and which consists of, without limitation, antennae, equipment and storage and other accessory structures used to provide wireless telecommunication services.

Workshop A facility where goods are produced or repaired on a small scale by hand, using hand tools or small-scale equipment, including small engine repair, furniture making and restoring, upholstering, custom car or motorcycle restoring or other similar uses.

X, Y, Z

Yard means that portion of the open area on a lot extending open and unobstructed from the ground upward from a lot line for a depth or width specified by the regulations for the zone district in which the lot is located.

Yard, front means a yard extending across the full width of the lot between the front lot line and the nearest line or point of the building.

Yard, front setback means the distance a building or structure must be placed from the back of the front property line.

Yard, rear means a yard extending across the full width of the lot between the rear lot line and the nearest line or point of the building.

Yard, rear setback means the distance a building or structure must be placed from the back of the rear property line.

Yard, side means a yard extending from the front yard to the rear yard between the side lot line and the nearest line or point of the building.

Yard, side setback means the distance a building or structure must be placed from the back of the side property line.

Zone district means a zone district of the Town as established in Article 5 of this Code, unless the term is used in a context that clearly indicates that the term is meant to include both the zone districts of the Town and the zone districts of an adjoining governmental jurisdiction. Also referred to as zoning district.

Zoning map means the official zoning map adopted by the Board of Trustees by ordinance, as amended.



WELLINGTON WATERWISE

LANDSCAPE AND IRRIGATION DESIGN MANUAL



December 2021 Draft
FOR PUBLIC REVIEW



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INTRODUCTION

BACKGROUND

Wellington's population has more than doubled in the decade from 2010 to 2020. The Town is expected to continue to grow and include both residential and commercial developments, as well as associated parks, open space, and streetscapes. Residential land uses consume the most water as compared to other types of land uses, largely in part due to outdoor irrigation. Reducing water use for residential outdoor watering is identified as one of the most effective strategies for conserving the Town's treated water supplies. Reducing outdoor irrigation for other land use types is also desirable. The 2018 Water Efficiency Plan identifies a goal of lowering the Town's treated water demand by 5% between 2018 and 2023, and a total of up to 10% by 2027 (2018 Water Efficiency Plan).

Irrigation associated with landscape plantings in residential areas uses the most water. This includes private properties, streetscapes, and developed parks. "Xeriscape" is the strategic application of the minimum amount of irrigation water that is required to sustain the level use that a site receives, or to sustain key, highly visible, ornamental features that could not survive without supplemental water. These strategies have been promoted for

more than 35 years by many organizations and government agencies in Colorado, although property owners and the development community have been slow to embrace xeriscape principles. The reasons for not applying the principles of Xeriscaping include a culture that perceives beauty based on "abundant green", which is imported from other areas of the country where the climate is different, and where precipitation is higher. Water, including for irrigation purposes, has also been relatively inexpensive in northern Colorado, which is a disincentive to conserve the resource.

Some communities in Colorado have taken bold steps to reduce water consumption that is associated with irrigating landscapes. They may have specific requirements for maximum amounts of water that can be applied, special plant lists, design criteria for landscaping and irrigation systems, and submittal requirements associated with zoning changes or obtaining building permits or water taps. This design manual highlights some of the most applicable examples of what has been implemented in other municipalities and proposes various tools that can be employed to conserve water supply for the Town.

PURPOSE

This Landscape and Irrigation design Manual (the Manual) is intended to provide information for designers and property owners to create landscape designs that provide an attractive, comfortable environment for users while minimizing maintenance needs and reducing water use. The Manual was developed by conducting research

into comparable communities, developing a list of best practices, and involving community stakeholders, to create specific recommendations for implementation of best practices for specific site types.



PROCESS

PUBLIC INPUT

Introduction

The effort to develop this Design Manual and the corresponding Landscape Standards included in the Wellington Land Use Code, began with outreach to the community. This effort included discussions with key stakeholders as well as online polling as described herein.

Stakeholder Outreach

Stakeholders included developers, engineers, builders, and landscape architects with experience designing and developing in the Town of Wellington as well as parks and recreation staff and Homeowner's Associations. These discussions resulted in a two lists representing needs for regulatory changes in the Town's Land Use Code and needs for programming such as education, resources and incentives. Primary themes from stakeholder outreach are outlined below:

Elements to include in the Land Use Code:

- Restrict amount of irrigated turf
- Provide recommended plant list
- Require all open spaces not used for athletic fields or play to be native grass
- Specify a maximum allowable irrigated area on large lots
- Require certain percentage of streetscapes to be xeriscape
- Provide a alternative grass option for lawns
- Require waterwise irrigation systems

Elements to be included as a Town Program:

- Promote irrigation system audits or updates
- Easy access to materials such as free mulch
- Rebates for reducing existing water usage
- Demonstration xeriscape garden
- Connect residents and businesses to available resources
- Offer a garden in a box program
- Encourage retrofitting existing landscapes

Online Polling

On April 30th, a poll was launched to understand the community's perception of low water (xeric) landscapes. A total of 203 responses were received in the two weeks the poll was open.

The poll asked two questions with the same series of images:

Q1 - Which of these landscapes represents xeriscape or low water landscape?

The top two choices included the following:



Q2 - Which of these landscapes would you prefer to see in Wellington?

The top choice included the following:

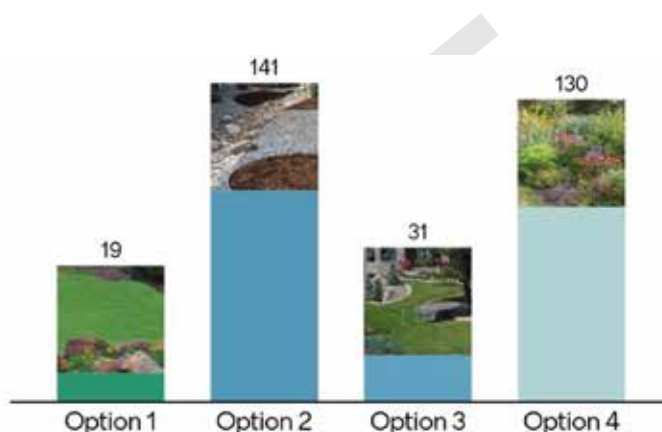


The conclusion to be drawn from this exercise is that although the image representing all rock and no landscape was identified as representative of xeriscape, the preference is for a more lush, green, colorful landscape palette. The least preferred option chosen was the image representing primarily turfgrass. These responses along with the stakeholder feedback directly influenced the resulting Design Manual and Code Standards.

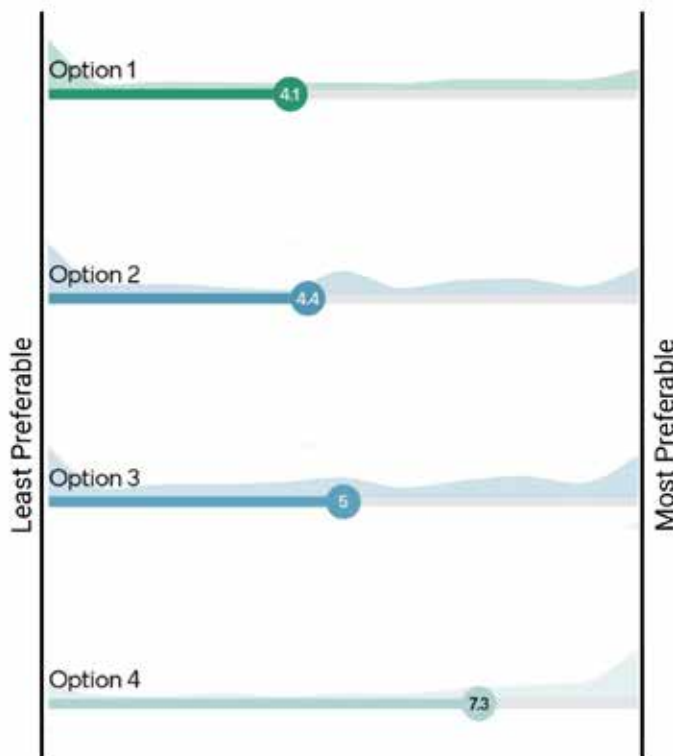
Summary of Feedback

Below is a snapshot of the results from the online polling conducted in April of 2021. Respondents were able to select all that applied in question 1 and were asked to rank the options in question 2 from least preferred to most preferred.

Q1: Which of these landscapes represent a xeriscape or low water landscape?



Q2: Which of these landscapes would you prefer to see in Wellington?



PROCESS

CASE STUDIES

Case studies of comparable municipalities and advisory groups was completed to gain insight into current best practices in landscape and irrigation design and management for water conservation.

Aurora, CO

Overview

The City of Aurora includes a Landscape Reference Manual that supports Chapter 4.7 Landscape, Water Conservation, and Stormwater Management, of the Unified Development Code (UDC). Additionally, the City has a waterwise demonstration garden to exhibit the preferred planting and irrigation techniques.

Details

- Requires permits for installation of turf or irrigation with an area greater than 250 sq. ft.
- Requires compost amendment must be added to the soil before a permit will be issued.
- Include a plant list ranking plant material by water use including a list of plants that require no supplemental water.
- Native vegetation does not need an automatic irrigation system.
- UDC includes section specific to Site Design for Low Impact Development
- UDC requires a variety of plant material including native drought-tolerant vegetation, and perennial and annual flowerbeds.

Centerra, CO

Overview

A showcase for sustainable development, Centerra is a 3,000-acre master-planned community in Loveland, CO. The development includes Landscape and irrigation Design Guidelines to ensure that every single development meets the established water conservation goals.

Details

- Provides principles of general landscape design and planting layout for water conservation such as limiting the use of high water turfgrass.
- Describes proper soil preparation techniques.
- Describes proper mulching techniques.
- Describes hydrozones.
- Includes guidelines on preservation or mitigation of existing vegetation.
- Provides an extensive plant list which lists characteristics such as flower color, blooming season, size, sun/shade needs and water needs.
- Provides irrigation design and construction criteria including guidance for operation, maintenance, and trouble shooting.



City of Aurora Waterwise Garden



Colorado Springs, CO

Overview

The Colorado Springs Landscape Code and Policy Manual Water is divided into four basic sections including general information on Code sections and policy numbers, plan requirements for signature landscapes, site category requirements, and a design manual for signature landscapes.

Details

- Conservation is mentioned throughout the guidance document. Some of the major water conservation goals include:
 1. Use of xeriscape principles;
 2. Use of site-specific plant material matched to soil type and microclimate;
 3. Conservation of indigenous plant communities;
 4. Promotion of landscapes that require minimal supplemental irrigation; and
 5. Prohibition of restrictive covenants requiring turf grass due to water demand.
- Includes a detailed list of suggested plants to use for the region.
- Requires professional qualifications to develop an irrigation plan.
- Includes hydrozones which take into account water demand, slopes, and microclimates.



Colorado Springs Utilities Xeriscape
Demonstration Garden

Erie, CO

Overview

The Town of Erie, Colorado not only includes landscape regulations specific to water conservation per the details below, but additionally, the Town recently retrofitted their own municipal building landscape to remove much of the high water use turf grass in lieu of a more xeric landscape as a demonstration of the principles within their Land Use Code.

Details

- Landscape plans are required to follow design treatments to facilitate water conservation. Treatments include:
 1. Appropriate turf selection to minimize the use of bluegrass;
 2. Use of mulch to maintain soil moisture and reduce evaporation;
 3. Zoning of plant materials according to their microclimate needs and water requirements;
 4. Improvement of the soil with organic matter if needed;
 5. Efficient irrigation systems;
 6. Proper maintenance and irrigation schedules; and
 7. Recirculation of water for decorative water features.



Erie Town Hall

PROCESS

Parker, CO

Overview

The City of Parker Land Development Ordinance Landscape Regulations include several xeriscape requirements.

Details

- Due to excessive watering requirements, seed mixtures or sod containing large percentages of Bluegrass or other traditional turf grasses are to be limited in use. Traditional turf grasses are defined as Bluegrass (*Poa pratensis*) and turf type tall fescue (*Festuca arundinacea*) and cultivars thereof.
- Traditional turf grasses shall only make up fifteen percent (15%) of any required on-site landscaping for commercial and industrial uses. Where recreational components are included, the Planning Director may approve a greater amount of turf grass area. The applicant must demonstrate that the additional turf grass areas are being used in high-traffic areas such as athletic fields, children's play areas, parks and courtyards.
- Traditional turf grasses are prohibited for use on any interior parking lot landscaping.
- Preferred turf grasses include Buffalo Grass (*Buchloe dactyloides*) and Blue Grama (*Bouteloua gracilis*). Other native seed and seed blends will be considered that satisfy the requirements of this Section. There is no limitation on the use of preferred turf grass species

Colorado Growing Water Smart, The Water-Land Use Nexus Guidebook

Overview

Growing Water Smart is a program developed by the non-profit Sonoran Institute in partnership with the Lincoln Institute of Land Policy's Babbitt Center for Land and Water Policy with the goal of realizing watershed health and community resiliency. In addition to providing workshops for communities across the west, they prepared the referenced document which provides a long list of basic principles to support water efficient landscaping, green infrastructure, & low impact development.

Details

- Conduct an assessment of saving potential by comparing annual water demands on a new property against an older property or properties with comparable area, plantings, and
- In order to approve new development, there must be:
An estimate of the amount of water supply needed for build out.
- A description of the source of the water supply.
- An estimate of the yield from the source under various hydrological conditions.
- Water demand management measures to be used.
- Any additional information the local government may require.



Sustainable Garden by American Design & Landscape



Colorado Water Conservation Guide

Overview

This is a citizen's guide to conserving water in Colorado which goes into detail about Colorado's fluctuating water supply/demand as well as how to be more efficient with water use in Homes and Cities. In addition to listing interior water savings techniques such as plumbing fixtures and appliances, there is guidance on ways to save with exterior water use per the details below.

Details

- Consider reuse of both potable and non-potable water
- Micro-irrigation (drip or microsprays) is estimated as up to 95% efficient irrigation technique as they deliver water directly on or below the soil surface.
- Includes a table with different types of irrigation technology and where they are most efficient.
- Efficient water use depends on management as much as the equipment utilized.
- Irrigation controllers can help residents use up to 50% less water by controlling the amount of time and water placed on the landscape.
- Non-irrigated native seed areas are not included in Composite Landscape Water Use Rating calculations.

Smart Growth Water-Efficient Landscape Design

Overview

"Water-Efficient Landscape Design is meant to serve as an alternative or supplement to the landscape design section of the Model Land Use Code for Colorado's Small Communities". The document provides a section dedicated to definitions of irrigation and other related terms.

Design Standards

- Landscapes shall use the following xeriscape design principles to facilitate water conservation:
 1. Well-planned planting schemes;
 2. Appropriate turf selection to minimize the use of bluegrass;
 3. Use of mulch to maintain soil moisture and reduce evaporation;
 4. Use plantings and berms to create outdoor rooms in common open space areas.
 5. Zoning of plant materials according to their micro-climatic needs and water requirements;
 6. Improvement of the soil with organic matter if needed;
 7. Efficient irrigation systems; and
 8. Proper maintenance and irrigation schedules .



BEST PRACTICES

PLANTING DESIGN

Good planting design can reduce water use and long-term maintenance needs. The best practices highlighted below primarily result from the case study research performed.

Planting Beds

- Replacing irrigated turf with planting beds will reduce irrigation requirements and can ease maintenance commitments.
- Planting beds can be used to cover small areas where spray irrigation is inefficient.

Low Water Bluegrass Alternatives

- Replacing bluegrass with low water turf grass alternatives in areas that are not primarily used for foot traffic can achieve a similar landscape character while saving annual water use over the replaced area.

Shade Trees

- Providing shade trees to lawn areas or planting beds provides heat regulating benefits which can slow the evaporation of moisture therefore resulting in a reduction in irrigation needs.

Micro-climates or Hydrozones

- Avoid relying solely on irrigation to provide water to high water use plants.
- Create depressions or direct runoff to man-made or naturally occurring low spots to create conditions where species with higher water use requirements can thrive.
- Locate planting beds downhill from large impervious areas like parking lots or hard surface sports courts to take advantage of the runoff while capturing sediment.

High Water Plant Exclusion

- Avoid plants and planting/irrigation design that requires high levels of water use for an irrigation zone when the remainder of the zone would survive with a lesser amount of water.

Tactical Water Use

- Limit high and moderate use plant material to the most heavily used and visible areas.
- Design for low and no water use at parcel edges and low traffic areas.
- Use an irrigation budget to directly water high impact trees and shrubs via drip or bubble systems instead of spraying turf.
- Planting beds can be used to improve privacy or screen visually undesirable areas like trash and maintenance facilities.

Water Use Groups

- Group plants with similar water use requirements to prevent over watering of low-use plants in irrigation zones that require more water.

Focus on Species Diversity

- Use a variety of plant materials including the use of native varieties or species that do not require supplemental water.
- Refer to the suggested plant list in the appendices.
- Non-native species should only be used to achieve design objectives that are not possible through the use of native species. Species with non-native origins are more likely to have higher water requirements than native species.

IRRIGATION DESIGN

Design irrigation systems to use less water and apply water to the landscape more efficiently.

Similar Water Use

- Group plants with similar water use into irrigation zones to avoid over watering lower water use plants.

Non-Potable Water

- Use not-potable water where possible to conserve drinking water for domestic uses.

Overspray

- Irrigation spray heads should be calibrated to avoid overspray onto impervious surfaces such as walks and drives and into walls, fences, buildings, and other structures.

Overwatering

- The amount of irrigation water applied to the landscape shall be the minimum amount required to maintain healthy plant life.

Irrigation Timing

- Irrigation should occur between the hours of 9pm-6am to allow infiltration and to avoid excessive evaporation.

Drip Irrigation

- Use drip irrigation infrastructure wherever possible. Minimize areas requiring overhead spray irrigation.

Tree and Shrub Supplemental Irrigation

- Trees and shrubs not in areas receiving spray irrigation should receive individual irrigation via drip or bubbler systems.

Even Distribution

- Design all overhead spray irrigation systems to provide even distribution of sprayed water taking into account wind, landforms, vegetation, and other obstructions.

Establishment Watering

- Certain tree and shrub species can be planted outside of permanent irrigation zones if they receive supplemental watering while establishing root systems, approximately two to three years.

Efficient Equipment

- Install rain sensors to ensure that spray heads turn off while it is raining
- Use smart sensor controllers that are tied to weather applications.
- Where overhead spray heads are necessary, use efficient nozzles such as the Hunter MP Rotator.



BEST PRACTICES

GREEN INFRASTRUCTURE

Green infrastructure is an approach to water management that protects, restores, or mimics the natural water cycle. Incorporating green infrastructure is an effective way to reduce water usage and improve water quality.

Bioswales and Rain Gardens

- Capture stormwater by adding curb cuts to parking lots and streetscapes and depressing the planting area to allow for water to infiltrate rather than run off.
- Provides filtration of runoff before it returns to water courses or enters storm sewer systems.
- Can be planted attractively as a primary feature in the landscape.

Rain Barrels

- Store rainwater locally for later use, reduce irrigation draws and maximize efficiency of use of naturally occurring water.
- Follow applicable state laws with regards to amount of capture allowed and timing of release.

Permeable Pavement

- Incorporate permeable pavement instead of traditional hardscape to restore groundwater resources and reduce the amount of stormwater captured and conveyed off-site.

SOIL AMENDMENT AND COVER

Amending the soil properly prior to planting and using the right mulch can go a long way to reduce the water requirements of a landscape.

Soil Amendments

- Improve soil structure and moisture retention though the addition of composted organic material.
- Many Colorado communities require a rate of three cubic yards per 1000 square feet of landscape area integrated into the native soil to a depth of eight inches.
- Additional techniques include mixing one third compost with two thirds native soil in each planting hole.

Mulch

- Weeds cannot be avoided no matter the mulching technique. The best approach for water retention is to place three to four inches of shredded hardwood mulch on top of the soil in all planting beds.
- Trees planted in grass should include a mulched ring with a diameter of five feet around the trunk of the tree.





LANDSCAPE TYPES

DEFINITION OF LANDSCAPE TYPES

Landscape type is defined in this document by the amount of supplemental irrigation water required to sustain the plants in that landscape. The four landscape types are high, moderate, low, and xeric.

The amount of water is measured in gallons (gal) applied to a square foot (sf) of landscape over the irrigation season or year (yr).

The water requirement ranges to the right were derived by a calculation including the rate at which water evaporated from the soil locally in addition to known water requirements of plant species categorized by the landscape types herein.

Examples of the character and best applications of the landscape types used in this manual are shown on the following pages.

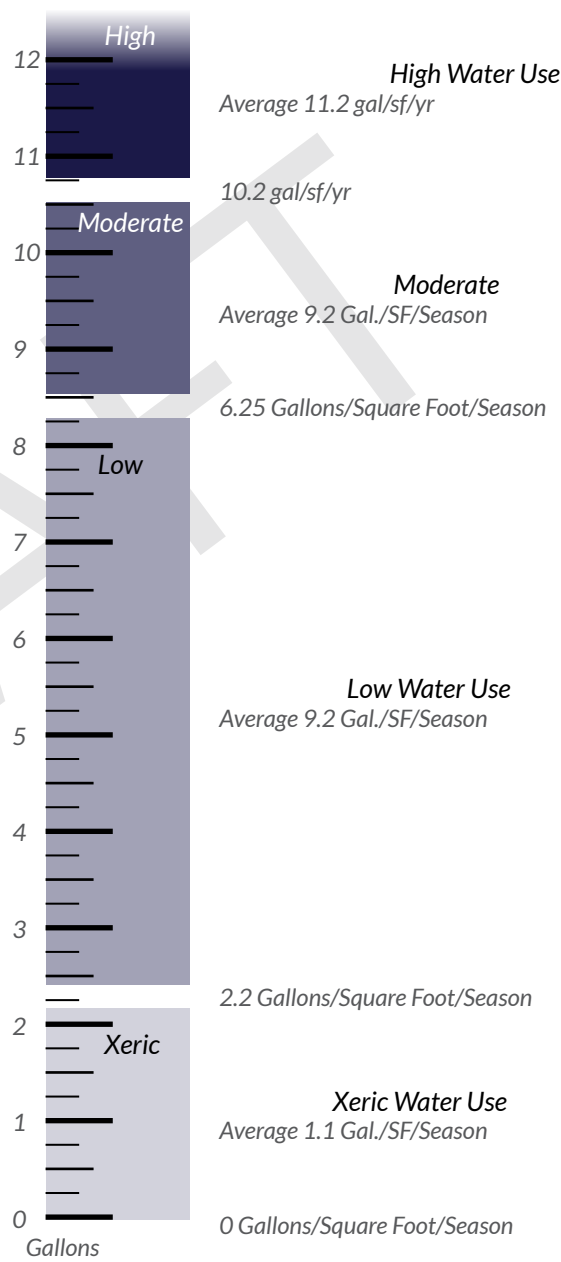
Average Water Use

There are many different ways to landscape a site. Reducing the area and amount of high water landscape types is the most effective way to reduce the overall water use of a site.

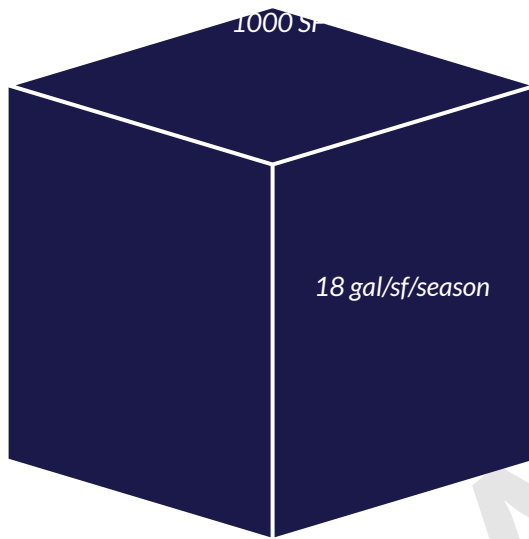
Site wide water use levels are determined by the average gallons per square foot per season applied across the site. This allows high water use areas to be balanced out with low and xeric areas, reducing overall water use.

Lot Average Water Use Reduction

The overall water usage of a property can be reduced by lowering the water usage of individual hydrozones and by increasing the ratio of lower water zones to higher water zones. Hydrozone means a portion of the landscaped area having plants with similar water needs that are served by an irrigation valve or set of valves with the same schedule.

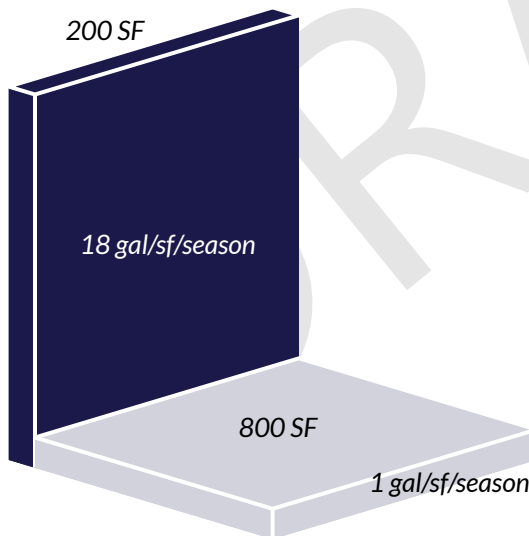


USING HYDROZONES TO REDUCE WATER USE



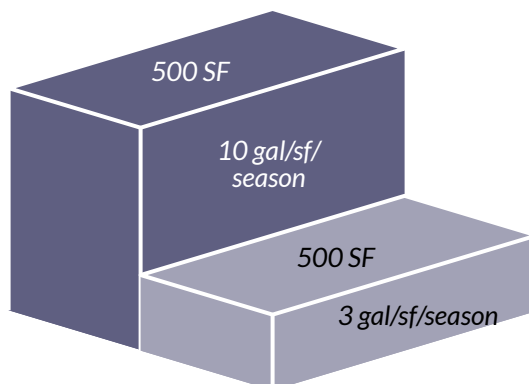
High Water, Large Area

A property that is landscaped exclusively with bluegrass can use several times the amount of water as the same size lawn landscaped using waterwise principles.



High Water, Small Area

A property with a high ratio of xeric to high water use landscape type can significantly reduce the overall water use of a site while preserving many of the visual and use benefits of irrigated bluegrass in high visibility or heavy foot traffic areas.



Balance of Moderate and Low Area

A landscape with a balanced ratio of medium to low water usage landscape types would fall into a medium hydrozone.

LANDSCAPE TYPES

HIGH WATER USE



Irrigated Bluegrass Park



Irrigated Bluegrass Lawn

Description

- The High Water Use Landscape type includes plants that require additional irrigation in excess of 10.2 gal/sf/season. This landscape is typified by bluegrass turf and annual planting beds.
- The total amount of water consumed by high water use landscape types is best limited by minimizing the total area covered by high water use plants.

Examples

Bluegrass Turf

- Traditional lawn areas watered by overhead spray irrigation.

Annual Flowers

- Typically planted in beds and watered heavily due to shallow root systems similar to bluegrass turf.

Shrubs, Grasses, Perennials, and Trees

- Consist of species found near water sources in nature such as birch trees, alder trees, willows, dogwoods, lily of the valley, ferns, and irises to name a few.

Best Applications

High Use, High Intensity, High Visibility Areas

- Maximize value and use of irrigated bluegrass by placing in high visibility, high traffic areas, specifically areas where it is shared by multiple users.
- Similarly, annual flowers are best used in small areas of high visibility for bright pops of color in the landscape.

MODERATE WATER USE



Moderate Water Use Planting Bed



Fescue Lawn

Description

- The moderate water use landscape type includes plants that require additional irrigation between 6.25-10.2 gallons/square foot/season. This landscape type is typified by, low water turf-type grasses, and some perennials, shrubs and trees.

Examples

Shrubs, Grasses, Perennials, and Trees

- Typically planted in beds and watered individually via drip or bubbler heads (not overhead spray).
- Consist of many of the more popular plant species such as maple trees, buckeye trees, crabapple trees, fruit trees, fir trees, euonymus, yew trees and shrubs, serviceberry, daphne, chokecherry, roses, spirea, bellflower, bleeding hearts, and peony.

Low Water Bluegrass Alternatives

- Turf type fescues that are maintained as lawns

Best Applications

Planting Beds

- Organize plants in planting beds and apply drip or bubbler irrigation to allow plants with higher water requirements to be watered with minimal waste.

Low use, High visibility areas

- Plant turf type fescue lawns instead of bluegrass turf in areas where the green lawn look is desired but there is no need to accommodate heavy foot traffic.

Specimen Planting

- Use high water shrubs, ornamental grasses, perennials and trees sparingly and plant species with high aesthetic value singly or in small groups and near other moderate water requirement plant material.

LANDSCAPE TYPES

LOW WATER USE LANDSCAPES



Native Grass Lawn



Low Water Planting Bed

Description

- The Low Water Use Landscape type includes plants that require additional irrigation between 2.2 and 6.25 gal/sf/season. This landscape is typified by low species that have adapted to our local climate as well as cultivars of native species that have been bred specifically to survive in our dry, high desert conditions.

Examples

Shrubs, Grasses, Perennials, and Trees

- Typically planted in beds and watered individually via drip or bubbler heads (not overhead spray).
- Consists of species such as honeylocust trees, kentucky coffee tree, hawthorn trees, some oak tree species, juniper, some pine species, spruce, barberry, butterfly bush, peashrub, lilac, cotoneaster, privet, ninebark, viburnum, potentilla, columbine, coreopsis, lavender, lupine, coneflower, and veronica.

Low Water Bluegrass Alternatives

- Buffalograss, Blue Grama, and other native short growth prairie grasses.

Best Applications

Planting Beds

- Organize plants in planting beds and apply drip or bubbler irrigation.

Low Intensity Use Areas

- Use high and moderate water landscape types sparingly and group together for efficient watering.

Low Maintenance

- Amend soils with organic matter at rates appropriate to the landscape type (see land use code section 5.04.3) and use shredded hardwood mulch to keep weeds to a minimum, reduce evaporation of water from the soil, and keep the plant roots cool.

XERIC WATER USE LANDSCAPES



Xeric Residential Landscape



Native Plant Landscape

Description

- The Xeric Landscape type includes plants and inert materials that require less than 2.2 gallons/square foot/season of supplemental irrigation. This landscape type is typified by native grasses, perennials, shrubs, and trees as well as inert groundcover material that requires no irrigation.

Examples

Native Grasses

- Native short growth prairie grasses and wildflowers.

Shrubs, Grasses, Perennials, and Trees

- Consists of species such as tree of heaven, hackberry tree, some oak tree species, buckthorn trees, sumac, elm trees, western serviceberry, sage, mountain mahogany, rabbitbrush, apache plume, mockorange, forsythia, currant, some juniper species, cactus, many pine species, yucca, yarrow, delphinium, penstemon, wild geranium, aster, daylily, flax, and tulip.

Inert Material

- Wood or stone mulch without plants and accent boulders.

Best Applications

Areas with Irrigation Difficulties

- Use xeric plants in areas that are too small to be watered efficiently or where access to water is difficult or impossible, i.e. too far from or isolated from the irrigation source.
- Use accent boulders to provide texture and variety in planting beds.

Low/No Maintenance Areas

- Areas that are too large or difficult to maintain regularly should be planted with native species that require little to no oversight.

Areas with difficult growing conditions

- Include xeric landscape types alongside roads and in areas receiving very little sunlight (inert materials).

SITE TYPES

OVERVIEW

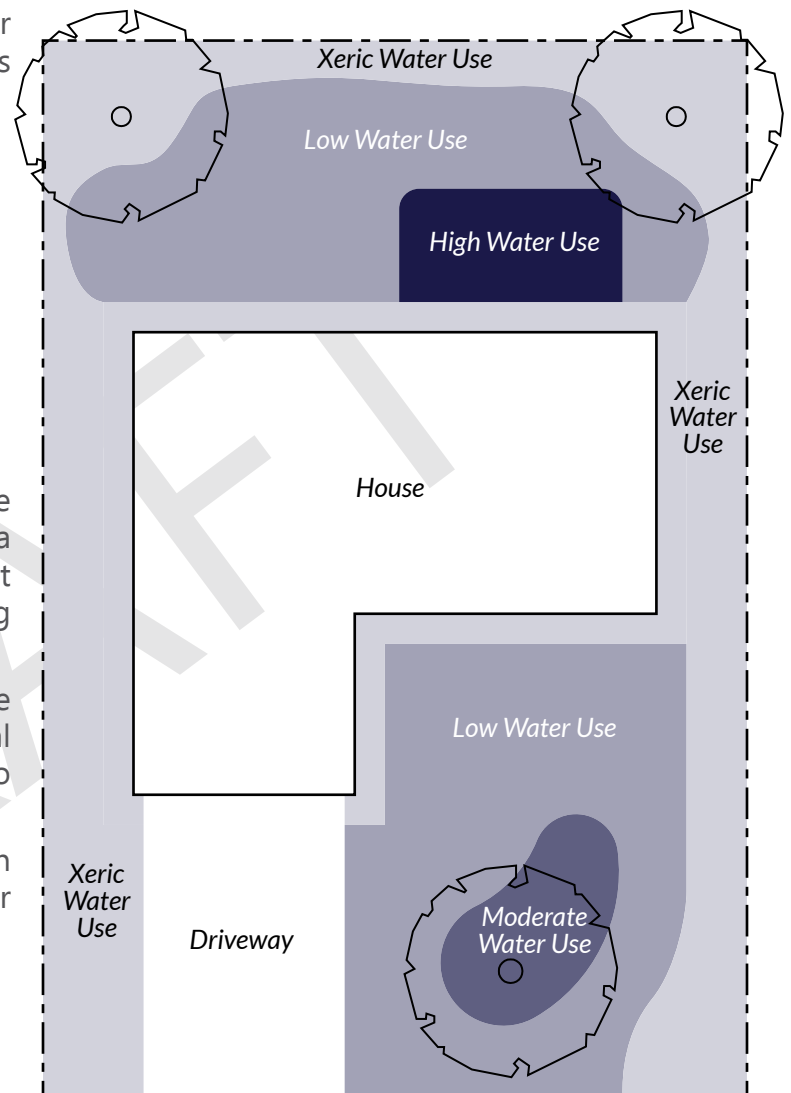
'Site Type' in this document refers to the character and use of a property. Site types covered by this document include:

- Parks and Open Space
- Streetscapes
- Multi-Family Residential
- Standard Lot Single Family Residential
- Large Lot Single Family Residential
- Nonresidential Development
- Industrial Development

For each type of site a graphic similar to the one at the right is used to conceptually illustrate a planting and irrigation design that implements best practices to minimize water use while preserving the aesthetic value of the site.

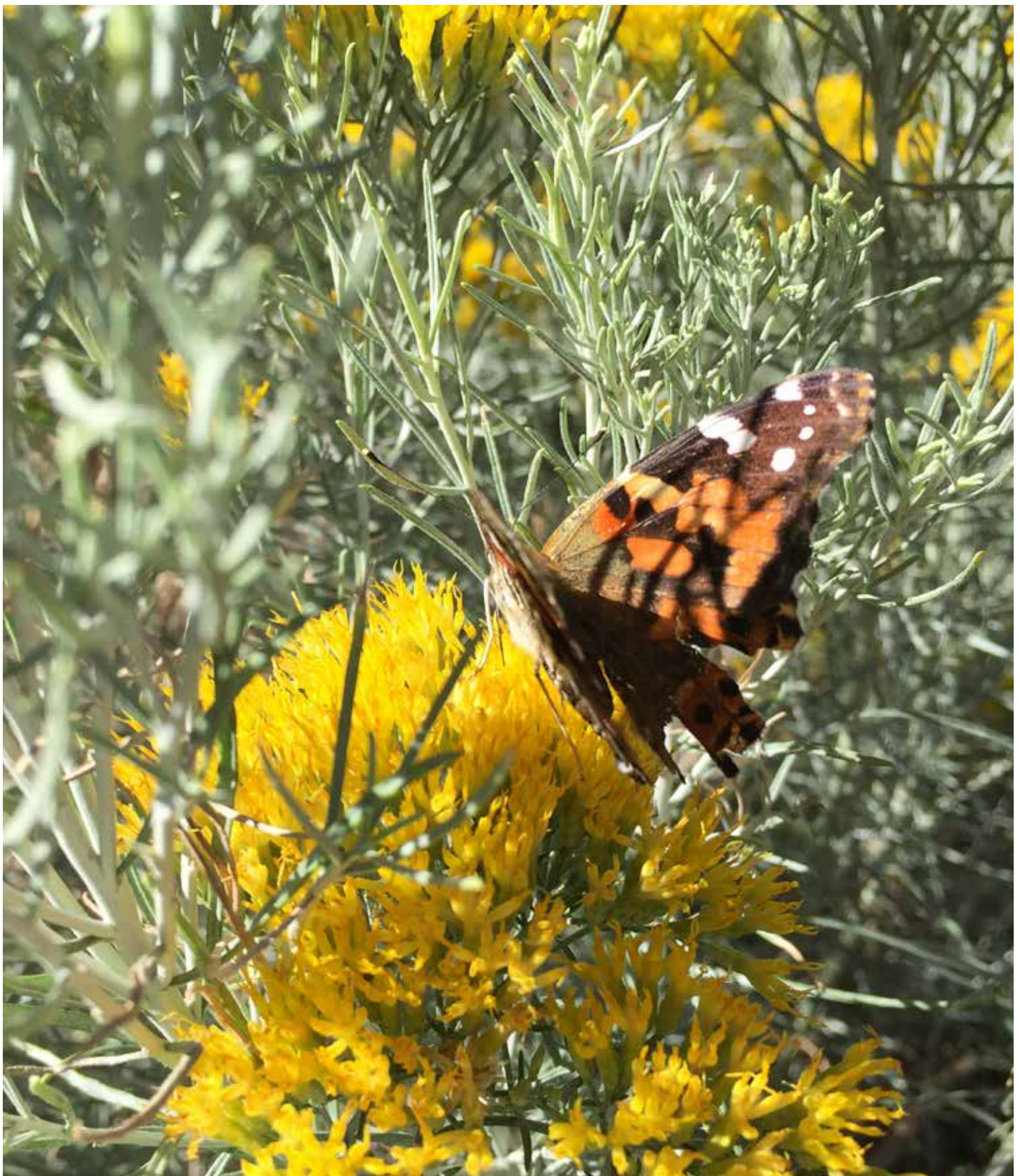
Images provide examples of what each landscape type can look like for each site type. Individual graphics are diagrammatic only and intended to convey design goals.

The graphics to the right show how water use can be reduced by minimizing the area of high water use landscape.



Water Use Landscape Types





SITE TYPES

PARKS AND OPEN SPACE



High Water Use

Use irrigated bluegrass in areas with frequent, intensive use including sports field and play areas.



Moderate Water Use

Incorporate planting beds and lower water turf alternatives along walkways and in low use/low traffic areas.



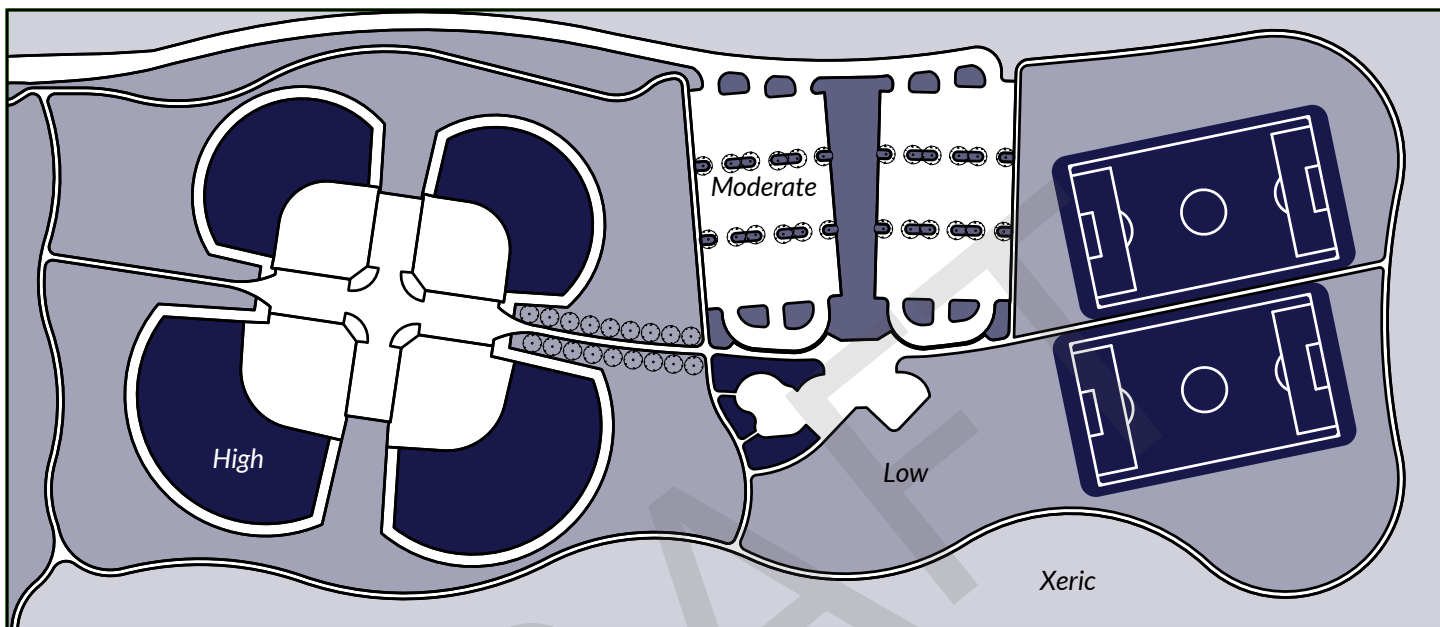
Low Water Use

Plant buffalo grass or blue grama and low water landscape types around the fringes of the site.



Xeric Water Use

Native plant material in passive areas, detention ponds and large open space areas to reduce water and maintenance requirements.



Water Use Landscape Types



These areas apply to all of the elements of parks and open space including detention ponds, active park space, passive park space, trail connections, and natural areas.

Above is an analysis of a large public park space with ballfields, parking lots, active play space, passive play space, trails, and native open space. The typical water usage for each scenario is

illustrated to show the water cost savings with a more balanced approach of low to xeric design.

The preferred scenario is to only use high water turf grass where needed for high traffic play surfaces in combination with a lower water use turf such as a fescue mix in lower traffic areas, xeric planting beds around parking lots, and low to no water native trees, shrubs and grasses around the edges.

SITE TYPES

STREETSCAPE



High Water Use

Limit irrigated bluegrass to locations with high visibility, including gateways and entrances.



Moderate Water Use

Mulch planting beds and install drip irrigation along roads and sidewalks can reduce required irrigation and maintenance of the more typical high water landscape type.



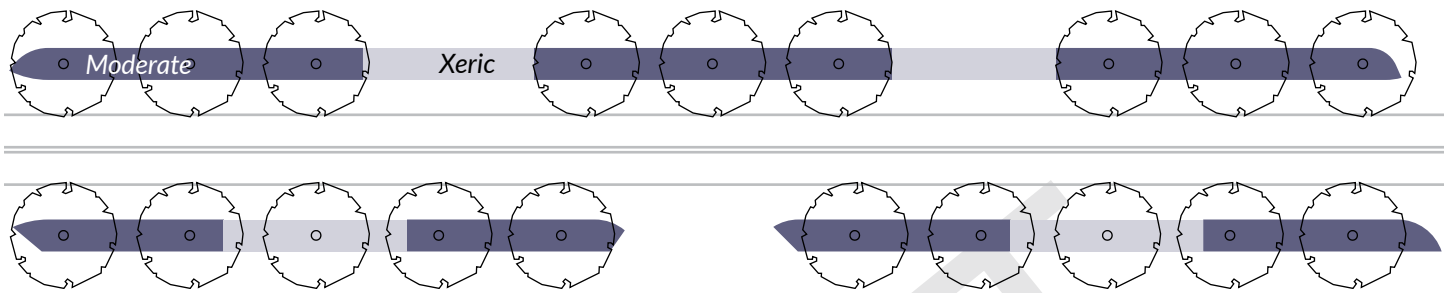
Low Water Use

Capture runoff from impervious surfaces to supplement direct rainfall and reduce irrigation volume requirements and allow sediments and pollutants to settle out of stormwater before reaching a drain inlet. Bioswales require hearty plants that are tolerant of salt and other chemicals found in road runoff.



Xeric

A mix of native and inert materials are appropriate for streetscapes because they don't require supplemental water, aren't affected by difficult growing conditions, and do not require as much maintenance as a higher water landscape type.



Landscape Types



The streetscape standards define planting requirements along public streets to improve right-of-way appearance and manage water use. The standards specify plant locations and spacing in consideration of the safety concerns of planting adjacent to roadways.

Species selection should take into account water use, maintenance requirements, potential hazards, and seasonal interest.

In general, streetscape landscape design should aim to reduce the use of turf grass and other high water usage species in favor of alternatives that require less maintenance and less water use.

SITE TYPES

MULTI-FAMILY RESIDENTIAL



High Water Use

Bluegrass should only be used in high visibility and high foot traffic areas.



Moderate Water Use

Planting beds to soften edges, improve visual character and create privacy.



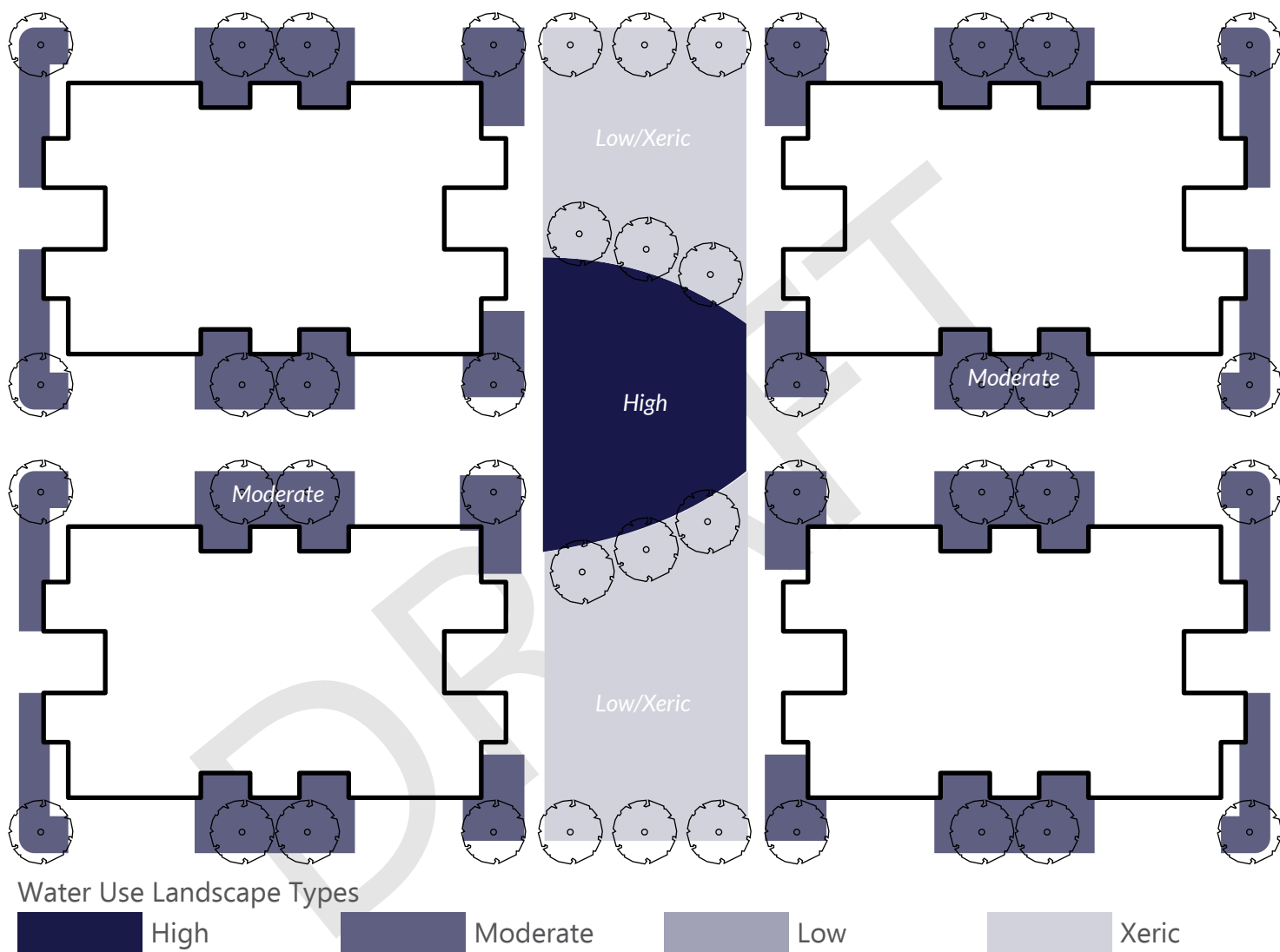
Low Water Use

Replace bluegrass turf with lower water alternatives in low volume or infrequent traffic areas to achieve a similar landscape character while saving annual water use over the replaced area.



Xeric

Use native plants mixed with accent boulders for an attractive landscape that uses little to no supplemental water throughout the growing season.



Multi-family landscape and irrigation standards apply to all multi-family and townhome developments. The standards in the Land Use and Development Code define the requirements for the size and character of planting areas to improve the appearance and function of landscape areas while maintaining water consciousness and integrating developments into surrounding neighborhoods. Planting at multi-family developments should be focused at key areas including screening around

mechanical areas and ornamental plantings around entrances and to provide visual interest along large featureless walls. Irrigated turf should be limited to active recreation areas and replaced with native grasses elsewhere.

Multi-family development standards also apply to shared parking lots and adjacent right-of-ways, both of which property owners are responsible for maintaining.

SITE TYPES

STANDARD LOT SINGLE FAMILY DEVELOPMENT



High Water Use

High water use areas and irrigated bluegrass should be limited to areas that are highly used and highly visible or where high water use specimen trees and shrubs are desirable.



Moderate Water Use

A mix of low to high water plant material which balances to a moderate water use to create full, vibrant planting beds.



photo credit: Creating Sustainable Landscapes, LLC

Low Water Use

Plant areas that are highly visible but infrequently used in lower water bluegrass alternatives such as buffalo grass or blue grama.

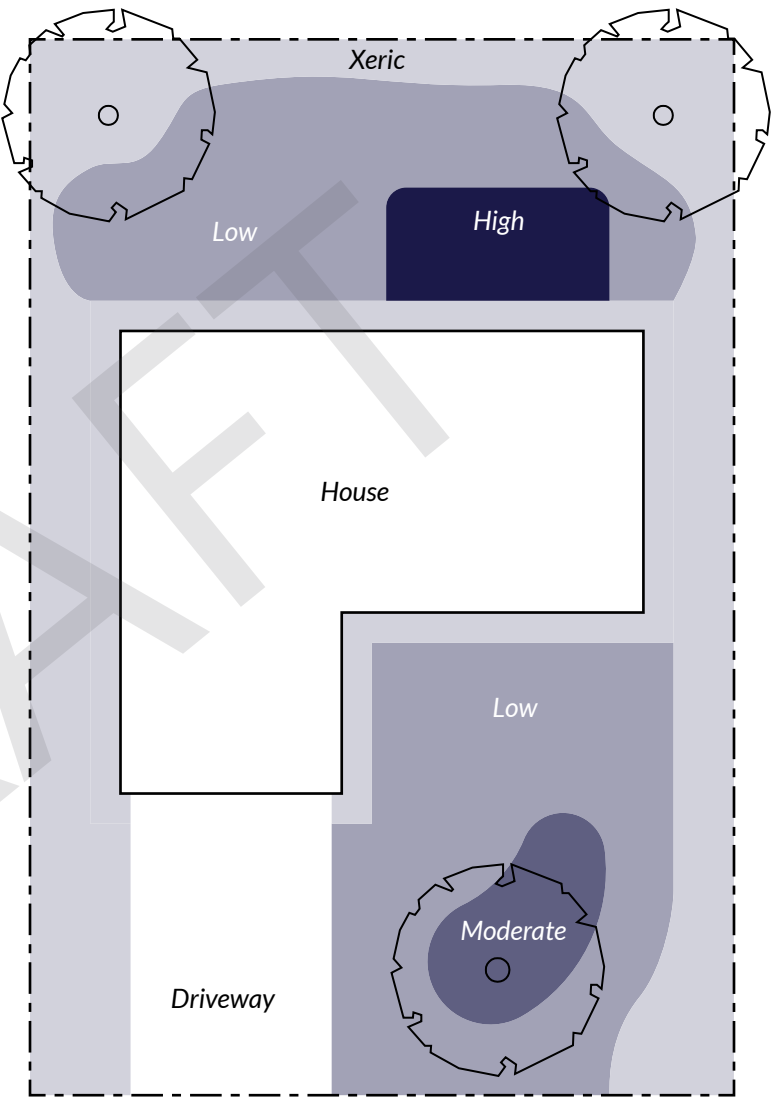


Xeric

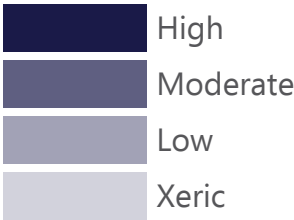
Plant native grasses around property boundaries or areas where low maintenance is desired.

This typology applies to all standard sized single family residential parcels in the Town from Downtown Neighborhoods to the outlying subdivisions with an average lot size of 6,000 to 8,000 SF.

To the right is an analysis of a typical parcel showing a range of planting scenarios from high water use (primarily bluegrass turf) to very low water use (primarily native plants that require little to no supplemental watering). The ultimate goal is to install a balanced landscape which includes no more than 50% bluegrass turf and organizes plant material into hydrozones, grouping plantings with similar water needs to allow for a more efficient watering system. It is not the intention to result in single family parcels that are covered in rock and little landscape, therefore a minimum of 75% of the front yard shall be covered in live plant material per the Land Development Code.



Water Use Landscape Types



SITE TYPES

LARGE LOT SINGLE FAMILY DEVELOPMENT



High Water Use

Maintain irrigated bluegrass in frequently used and highly visible areas rather than using bluegrass as the primary groundcover as pictured above.



Moderate Water Use

Use lower water use bluegrass alternatives in low-use/high-visibility areas to reduce water use without sacrificing visual quality. Divide up turf areas with planting beds with a variety of watering requirements.



Low Water Use

Plant large landscape beds with low water use landscape types. Plant the remainder of the yard in native grasses or buffalo grass and blue grama.

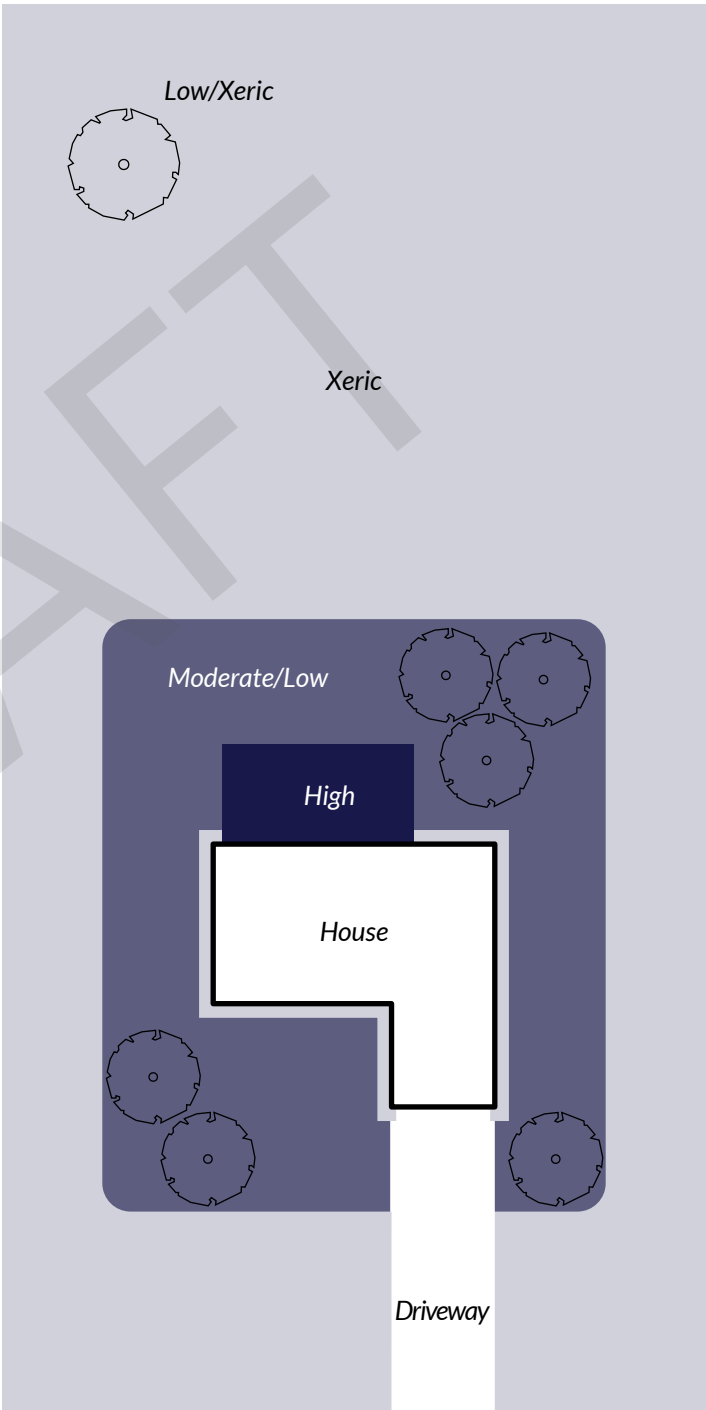


Xeric

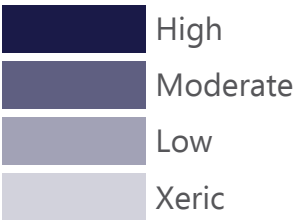
Use a palette of native and xeric plant material close to the house. Plant large open spaces in native grasses and wildflowers that do not require supplemental water and can be left natural with little maintenance or mowed for a more manicured look.

This site type is large size single family residential parcels in the Town. To be considered large a parcel must exceed one half acre (1/2) in size.

The standards for large lot single family development aim to reduce overall water usage while preserving the natural character of the surrounding landscape. By recommending smaller areas of irrigated turf that are kept close to buildings and away from property edges the standards create larger, more contiguous areas of native plants that preserve the natural character of Wellington’s rural surroundings while reducing water usage.



Water Use Landscape Types



SITE TYPES

NONRESIDENTIAL DEVELOPMENT



High Water Use

Concentrate high water plant material such as bluegrass turf to strategic or high traffic locations such as building entries and gathering spaces.



Moderate Water Use

Target use of an irrigation budget to directly water high impact trees and shrubs via drip or bubble systems instead of spraying turf.



Low Water Use

Replace bluegrass with low water alternatives in low volume or infrequent traffic areas to achieve a similar landscape character while saving annual water use over the replaced area.



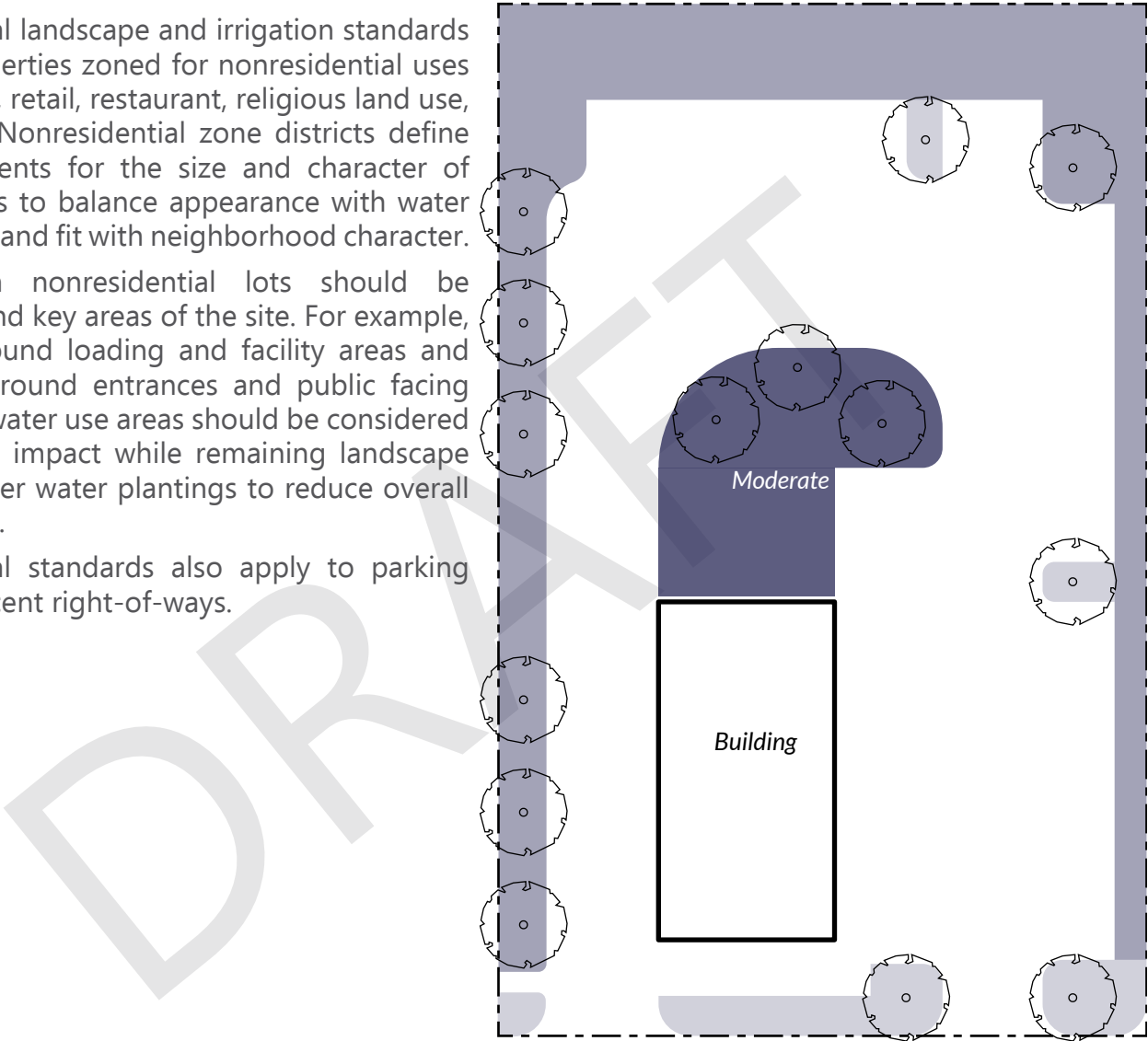
Xeric Planting

Use no water native plantings and low water use planting beds with drip irrigation in areas that are further from the irrigation source.

Nonresidential landscape and irrigation standards apply to properties zoned for nonresidential uses such as office, retail, restaurant, religious land use, schools, etc. Nonresidential zone districts define the requirements for the size and character of planting areas to balance appearance with water requirements and fit with neighborhood character.

Plantings on nonresidential lots should be focused around key areas of the site. For example, screening around loading and facility areas and ornamental around entrances and public facing places. High water use areas should be considered for maximum impact while remaining landscape area uses lower water plantings to reduce overall site water use.

Nonresidential standards also apply to parking lots and adjacent right-of-ways.



Water Use Landscape Types

	High
	Moderate
	Low
	Xeric

SITE TYPES

INDUSTRIAL DEVELOPMENT



High Water Use

Irrigation of high water requirement plants should be limited to areas that will achieve the maximum benefit for the amount of water used (i.e. employee break area, entrances and gateways).



Moderate Water Use

Direct watering of landscape screens through use of drip or bubble systems can maximize the landscape benefit per gallon of water used. Screening vegetation should be placed in landscape beds to reduce water use and maintenance requirements.



Low Water Use

Use low water use plant material in planting beds for perimeter treatments required by the Land Use and Development Code.



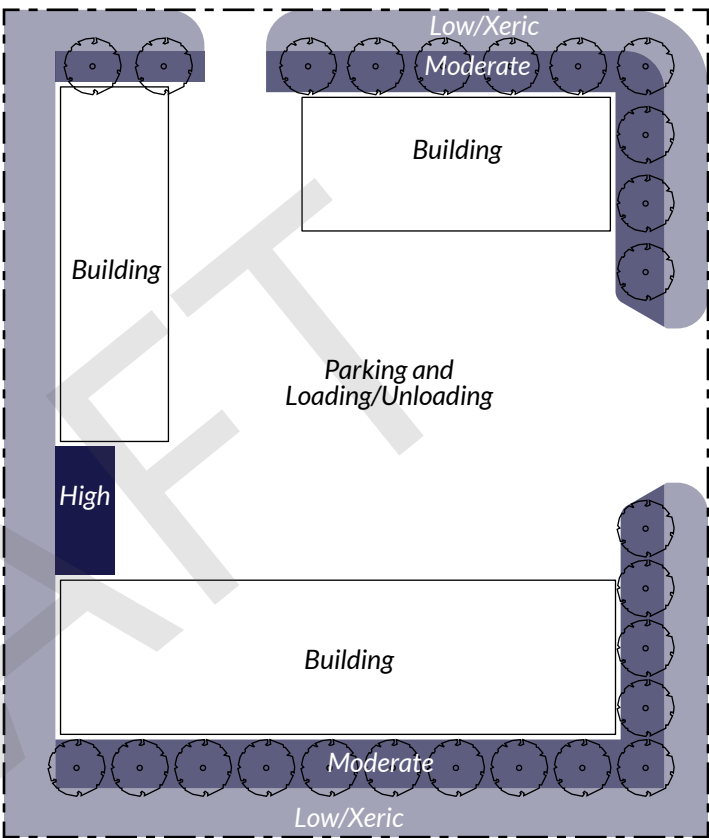
Xeric

Incorporate native plants, accent boulders, and rock mulch into required planting areas for low water use and lower maintenance.

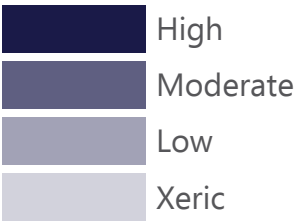
Water usage on properties zoned for industrial use should focus on the development and maintenance of vegetation buffers and screening and landscape infrastructure such as bioswales and other stormwater and water quality management practices or shade plantings to reduce climate control energy expenditures.

Small areas for employee break spaces can be also be high water usage zones.

While commercial areas can benefit from the visual enhancements of additional plantings these benefits are of less impact in industrial areas and should be restricted to areas around street facing entries.



Water Use Landscape Types



WATER SAVINGS WORKSHEET

You can use the formulas below to estimate your current water usage and potential water savings by switching to lower water use landscaping.

1. Find Total Landscaped Area

Total Parcel Area _____ Acres
 - Structures and Impervious Area _____ Acres

 Landscape Area _____ Acres



2. Estimate Current Water Use

Estimate the percentage of total landscape area at each water use level

Estimate the annual water use of each water use area: (Total Landscape Area * Percentage of Landscape Area * Gal/SF/Year)

High Water Use Area _____ % * 12 Gal/SF/Year = _____ Gal/Year
 Moderate Water Use Area _____ % * 9 Gal/SF/Year = _____ Gal/Year
 Low Water Use Area _____ % * 3 Gal/SF/Year = _____ Gal/Year
 Xeric (No Water Use) Area _____ % * 1 Gal/SF/Year = _____ Gal/Year

Add water use by area to estimate total annual water use

3. Estimate Reduced Water Use

Estimate the percentage of total landscape area at each water use level after implementing lower water use practices.

Estimate the annual water use of each water use area: (Total Landscape Area * Percentage of Landscape Area * Gal/SF/Year)

High Water Use Area _____ % * 12 Gal/SF/Year = _____ Gal/Year
 Moderate Water Use Area _____ % * 9 Gal/SF/Year = _____ Gal/Year
 Low Water Use Area _____ % * 3 Gal/SF/Year = _____ Gal/Year
 Xeric (No Water Use) Area _____ % * 1 Gal/SF/Year = _____ Gal/Year

Add water use by area to estimate total annual water use

Estimated Reduced Water Use -
 Estimated Current Water Use =
 Water Savings

ADDITIONAL RESOURCES

Below is a list of websites that link to additional resources providing everything from additional plant lists to proposed waterwise techniques in landscape design.

<https://sonoraninstitute.org/>

<https://extension.colostate.edu/>

<https://www.northernwater.org/>

https://www.auroragov.org/business_services/development_center/codes_rules/landscaping

<https://coloradowaterwise.org/XeriscapeColorado/>

<https://cmg.extension.colostate.edu/gardening-resources/online-garden-publications/water-wise-landscaping-xeriscaping/>

<https://www.botanicgardens.org/>

<https://www.fcgov.com/gardens/>

https://www.highcountrygardens.com/?gclid=Cj0KCQiA2ZCOBhDiARIsAMRfv9KRjQkk5Dw2iy5v06i_vfcK4ZBIBkkKIKMIEA-FeThMuWVVpSDmNMsaAjwIEALw_wcB

<https://resourcecentral.org/gardens/>



photo credit: Resource Central, Garden in a Box

RECOMMENDED PLANT LIST

TREES

Genus	Species	Common Name	Water Use
<i>Acer</i>	<i>ginnala</i> (all cultivars)	Amur Maple	
<i>Acer</i>	<i>grandidentatum</i>	Bigtooth Maple	
<i>Acer</i>	<i>tataricum</i>	Tatarian Maple	
<i>Aesculus</i>	<i>glabra</i>	Ohio Buckeye	
<i>Aesculus</i>	<i>pavia</i>	Red Buckeye	
<i>Aesculus</i>	<i>hippocastanum</i>	Horsechestnut	
<i>Amelanchier</i>	<i>sp.</i>	Serviceberry	
		Saskatoon Serviceberry	
		Regent Serviceberry	
		Autumn Brilliance Serviceberry	
		Shadblow Serviceberry	
<i>Catalpa</i>	<i>speciosa</i>	Western Catalpa	
<i>Celtis</i>	<i>occidentalis</i>	Hackberry	
<i>Cercis</i>	<i>sp</i>	Redbud	
<i>Crataegus</i>	<i>spp.</i>	Hawthorn	
	<i>ambigua</i>	Russian Hawthorn	
	<i>arnoldiana</i>	Arnold's Hawthorn	
	<i>crus-galli</i>	Cockspur Hawthorn	
	<i>crus-galli</i> var. <i>inermis</i>	Thornless Cockspur Hawthorn	
	<i>douglasii</i>	River Hawthorn	
	<i>mollis</i>	Downy Hawthorn	
	<i>phaenopyrum</i>	Washington Hawthorn	
	<i>succulenta</i>	Fleshy Hawthorn	
	<i>virdia</i> 'Winter King'	Winter King Hawthorn	
<i>Gleditsia</i>	<i>triacanthos inermis</i> 'Imperial'	Imperial Honeylocust	
	<i>triacanthos inermis</i> 'Shademaster'	Shademaster Honeylocust	
	<i>triacanthos inermis</i> 'Skyline'	Skyline Honeylocust	
	<i>triacanthos inermis</i> 'Sunburst'	Sunburst Honeylocust	
<i>Gymnocladus</i>	<i>dioica</i>	Kentucky Coffeetree	
<i>Juglans</i>	<i>nigra</i>	Black Walnut	
<i>Juniperus</i>	<i>spp.</i>	Juniper (all types)	
<i>Koelreuteria</i>	<i>paniculata</i>	Goldenrain Tree	
<i>Malus</i>	<i>spp.</i>	Apple and Crabapple	

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT

RECOMMENDED PLANT LIST

TREES

<i>Phellodendron</i>	<i>amurense</i>	Amur Corktree	
<i>Pinus</i>	<i>spp.</i>	Pine	
	<i>aristata</i>	Bristlecone Pine	
	<i>cembroides edulis</i>	Pinyon Pine	
	<i>flexilia</i>	Limber Pine	
	<i>nigra</i>	Austrian Pine	
	<i>ponderosa</i>	Ponderosa Pine	
	<i>strobiformis</i>	Southwestern White Pine	
	<i>sylvestris</i>	Scotch Pine	
<i>Prunus</i>	<i>spp.</i>	Cherries/Plums/Chokecherries	
<i>Pyrus</i>	<i>spp.</i>	Pear (Ornamental)	
	<i>calleryana</i> 'Aristocrat'	Aristocrat Pear	
	<i>calleryana</i> 'Chanticleer'	Chanticleer Pear	
	<i>calleryana</i> 'Stone Hill'	Stone Hill Pear	
	<i>fauriei</i>	Fauriei Pear	
	<i>fauriei</i> 'Korean Sun'	Korean Sun Pear	
	<i>ussuriensis</i>	Ussurian Pear	
	<i>ussuriensis</i> 'Prairie Gem'	Prairie Gem Pear	
<i>Quercus</i>	<i>spp.</i>		
	<i>alba</i>	White Oak	
	<i>bicolor</i>	Swamp White Oak	
	<i>gambelii</i>	Gambel Oak	
	<i>imbricaria</i>	Shingle/Laurel Oak	
	<i>macrocarpa</i>	Bur Oak	
	<i>prinus</i>	Chestnut Oak	
	<i>robur</i>	English Oak	
	<i>robur</i> 'Fastigiata'	Columnar English Oak	
	<i>undulata</i>	Wavy Leaf Oak	
<i>Robinia</i>	<i>pseudoacacia</i>	Black Locust	
<i>Sophora</i>	<i>japonica</i>	Japanese Pagoda Tree	
<i>Syringa</i>	<i>pekinensis</i>	Peking Lilac	
<i>Syringa</i>	<i>reticulata</i>	Japanese Tree Lilac	
<i>Ulmus</i>	<i>frontier</i>	Elm	
	<i>george washington</i>		
	<i>triumph</i>		

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT

RECOMMENDED PLANT LIST

SHRUBS

Genus	Species	Common Name	Water Use
<i>Acer</i>	<i>ginnala</i> 'Bailey Compact'	Bailey Compact Amur Maple	
<i>Acer</i>	<i>ginnala</i> 'Compactum'	Compact Amur Maple	
<i>Acer</i>	<i>ginnala</i> 'Emeral Elf'	Emerald Elf Amur Maple	
<i>Acer</i>	<i>ginnala</i> 'Flame'	Flame Amur Maple	
<i>Acer</i>	<i>tataricum</i>	Tatarian Maple	
<i>Amelanchier</i>	<i>sp.</i>	Serviceberry	
		Saskatoon Serviceberry	
		Regent Serviceberry	
		Autumn Brilliance Serviceberry	
		Shadblow Serviceberry	
<i>Aronia</i>	<i>sp.</i>	Chokeberry	
<i>Artemisia</i>	<i>spp.</i>	Sage	
	<i>cana</i>	Silver Sagebrush	
	<i>tridentata</i>	Tall Western Sagebrush	
<i>Atriplex</i>	<i>canescens</i>	Four-wing Saltbrush	
<i>Berberis</i>	<i>spp.</i>		
	<i>mentorensis</i>	Mentor Barberry	
	<i>thunbergii</i> 'Atropurpurea'	Red Leaf Barberry	
	<i>thunbergii</i> 'Bagatelle'	Bagatelle Barberry	
	<i>thunbergii</i> 'Crimson Pygmy'	Crimson Pygmy Barberry	
	<i>thunbergii</i> 'Rose Glow'	Rose Glow Barberry	
<i>Buddleia</i>	<i>davidii</i>	Butterfly Bush	
<i>Caragana</i>	<i>spp.</i>	Peashrub	
	<i>arborescens</i>	Siberian Peashrub	
	<i>arborescens</i> 'Lobergii'	Fern-leaf Siberian Peashrub	
	<i>frutex</i> 'Globosa'	Globe Peashrub	
	<i>maximowicziana</i>	Maximowicz Peashrub	
<i>Caryopteris x clandonensis</i>		Blue Mist Spirea	
<i>Ceanothus</i>	<i>fendleri</i>	Mountain Lilac	
<i>Ceratoides</i>	<i>lanata</i>	Winterfat	

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RECOMMENDED PLANT LIST

SHRUBS

<i>Cercocarpus</i>	<i>spp.</i>	Mountain Mahogany	
	<i>brevifolius</i>	Little-Flowered Mountain Mahogany	
	<i>intricatus</i>	Littleleaf Mountain Mahogany	
	<i>ledifolius</i>	Curl-Leaf Mountain Mahogany	
	<i>montanus</i>	Common Mountain Mahogany	
<i>Chamaebatiaria</i>	<i>millefolium</i>	Fernbush	
<i>Chrysothamnus</i>	<i>sp.</i>	Rabbitbrush	
<i>Cotoneaster</i>	<i>spp.</i>	Cotoneaster	
	<i>acutifolia</i>	Peking Cotoneaster	
	<i>apiculatus</i>	Cranberry Cotoneaster	
	<i>apiculatus</i> 'Tom Thumb'	Tom Thumb Cotoneaster	
	<i>dammeri</i> 'Coral Beauty'	Coral Beauty Cotoneaster	
	<i>divaricatus</i>	Spreading Cotoneaster	
	<i>horizontalis</i>	Rock Cotoneaster	
	<i>horizontalis perpusillus</i>	Ground Cotoneaster	
	<i>lucidus</i>	Hedge Cotoneaster	
<i>Cowania</i>	<i>neomexicana</i>	Cliffrose	
<i>Cytisus</i>	<i>spp.</i>	Broom	
	<i>scoparius</i> 'Moonlight'	Moonlight Broom	
	<i>purgans</i> 'Spanish Gold'	Spanish Gold Broom	
<i>Daphne</i>	<i>spp.</i>	Daphne	
<i>Euonymus</i>	<i>spp.</i>	Euonymus	
<i>Fallugia</i>	<i>paradoxa</i>	Apache Plume	
<i>Forestiera</i>	<i>neomexicana</i>	New Mexican Privet	
<i>Hippophae</i>	<i>rhamnoides</i>	Sea Buckthorn	
<i>Holodiscus</i>	<i>dumosus</i>	Rock Spirea	
<i>Juniperus</i>	<i>spp.</i>	Junipers	
<i>Kolkwitzia</i>	<i>amabilis</i>	Beautybush	
<i>Ligustrum</i>	<i>spp.</i>	Privet	
	<i>obtusifolium</i> var. <i>regalianum</i>	Regal Privet	
	<i>vulgare</i> 'Cheyenne'	Cheyenne Privet	
	<i>vulgare</i> 'Densiflorum'	Upright Privet	
	<i>vulgare</i> 'Lodense'	Lodense Privet	
<i>Lonicera</i>	<i>spp.</i>	Honeysuckle	

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT

RECOMMENDED PLANT LIST

SHRUBS

	<i>'honeyrose' (sp?)</i>	Honeyrose Honeysuckle	
	<i>korolkowii</i> var. <i>floribunda</i> 'Blue Velvet'	Blue Velvet Honeysuckle	
	<i>syringantha</i> var. <i>wolfii</i>	Lilac-flowering Dwarf Honeysuckle	
	<i>tatarica</i> 'Arnold Red'	Arnold Red Honeysuckle	
	<i>xylosteoides</i> 'Clavey's Dwarf'	Clavey's Dwarf Honeysuckle	
	<i>xylosteoides</i> 'Miniglobe'	Miniglobe Honeysuckle	
<i>Mahonia</i>	<i>repens</i>	Creeping Grape Holly	
<i>Perovskia</i>	<i>atriplicifolia</i>	Russian Sage	
<i>Philadelphus</i>	<i>spp.</i>	Mockorange	
	<i>lewisii</i>	Lewis Mockorange	
	<i>microphyllus</i>	Littleleaf Mockorange	
<i>Physocarpus</i>	<i>spp.</i>	Ninebark	
	<i>monogynus</i>	Mountain Ninebark	
	<i>opulifolius</i>		
	cultivars		
<i>Pinus</i>	<i>mugo</i>	Mugo Pine	
<i>Potentilla</i>	<i>spp.</i>	Potentilla	
<i>Prunus</i>	<i>spp.</i>	Cherries/Plums/Chokecherries	
	<i>besseyi</i>	Western Sand Cherry	
	<i>fruticosa</i>	Ground Cherry	
	<i>tomentosa</i>	Nanking Cherry	
	<i>virginiana</i>	Native Chokecherry	
<i>Quercus</i>	<i>gambelii</i>	Gambel Oak	
<i>Rhamnus</i>	<i>spp.</i>	Buckthorn	
	<i>frangula</i> 'Asplenifolia'	Fern-leaf Buckthorn	
	<i>frangula</i> 'Columnaris'	Columnar Buckthorn	
<i>Rhus</i>	<i>aromatica</i>	Fragrant Sumac	
	<i>aromatica</i> 'Gro-Low'	Gro-Low Sumac	
	<i>glabra</i>	Smooth Sumac	
	<i>glabra</i> var. <i>cismontana</i>	Rocky Mountain Sumac	
	<i>trilobata</i>	Threeleaf Sumac	
	<i>typhina</i>	Staghorn Sumac	
	<i>typhina</i> 'Lacinata'	Cutleaf Sumac	
<i>Ribes</i>	<i>spp.</i>	Gooseberry/Currant	

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT

RECOMMENDED PLANT LIST

SHRUBS

	<i>alpinum</i>	Alpine Currant	
	<i>alpinum</i> 'Green Mound'	Green Mound Currant	
	<i>aureum</i>	Golden Currant	
	<i>cereum</i>	Wax Currant	
	"Red Lake"	Red Lake Currant	
	"Pixwell"	Pixwell Currant	
<i>Rosa</i>	<i>spp.</i>	Shrub Roses	
<i>Robinia</i>	<i>pseudoacacia</i>	New Mexico Locust	
<i>Rubus x tridel</i>	"Beneden"	Beneden Thimbleberry	
<i>Shepherdia</i>	<i>sp.</i>	Buffaloberry	
<i>Spirea</i>	<i>spp.</i>	Spirea	
<i>Symphoricarpus</i>	<i>spp.</i>	Snowberry	
	<i>albus</i>	White Snowberry	
	<i>chenaultii</i> 'Hancock'	Hancock Coralberry	
	<i>doorenbosii</i> 'Magic Berry'	Magic Berry Coralberry	
	<i>doorenbosii</i> 'White Hedge'	White Hedge Snowberry	
	<i>occidentalis</i>	Western Snowberry	
	<i>orbiculatus</i>	Red Coralberry	
	<i>oreophilus</i>	Mountain Snowberry	
<i>Syringa</i>	<i>spp.</i>	Lilac	
	<i>hyacinthiflora</i> (all cultivars)	Early Lilac	
	<i>prestoniae</i> (all cultivars)	Late Lilac	
	<i>vulgaris</i> (all cultivars)	Common and French Lilac	
<i>Viburnum</i>	<i>spp.</i>	Viburnum	
	<i>lantana</i>	Wayfaringtree	
	<i>lantana</i> 'Mohican'	Mohican Viburnum	
	<i>lentago</i>	Nannyberry	
	<i>rhytidophylloides</i> 'Alleghany'	Alleghany Leatherleaf Viburnum	
<i>Yucca</i>	<i>sp.</i>	Yucca	

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT

RECOMMENDED PLANT LIST

PERENNIALS

Genus	Species	Common Name	Water Use
<i>Achillea</i>	<i>sp.</i>	Yarrow	
<i>Agastache</i>	<i>sp.</i>	Hyssop	
<i>Ajuga</i>	<i>reptans</i>	Bugleweed	
<i>Alcea</i>	<i>sp.</i>	Hollyhock	
<i>Alchemilla</i>	<i>mollis</i>	Lady's Mantle	
<i>Allium</i>	<i>sp.</i>	Ornamental Onion	
<i>Alyssoides</i>	<i>utriculata</i>	Bladderpod	
<i>Alyssum</i>	<i>montanum</i>	Mountain Gold	
<i>Alchemilla</i>	<i>mollis</i>	Lady's Mantle	
<i>Amsonia</i>	<i>hubrichtii</i>	Blue Star	
<i>Anacyclus</i>	<i>depressus</i>	Mt. Atlas Daisy	
<i>Anchusa</i>	<i>sp.</i>	Bogloss	
<i>Anemone</i>	<i>sp.</i>	Windflower	
<i>Antennaria</i>	<i>sp.</i>	Pussytoes	
<i>Anthemis</i>	<i>tinctoria</i>	Chamomile	
<i>Aquilegia</i>	<i>sp.</i>	Columbine	
<i>Arabis</i>	<i>caucasica</i>	Rock Cress	
<i>Arctostaphylos</i>	<i>santii</i>	Emerald Queen Manzanita	
<i>Arctostaphylos</i>	<i>uva-ursi</i>	Kinnikinnick	
<i>Arenaria</i>	<i>sp.</i>	Sandwort	
<i>Armeria</i>	<i>maritima</i>	Sea Pinks	
<i>Artemisia</i>	<i>frigida</i>	Fringed Sage	
<i>Artemisia</i>	<i>sp.</i>	Sage	
<i>Asclepis</i>	<i>tuberosa</i>	Butterfly Weed	
<i>Aster</i>	<i>sp.</i>	Aster	
<i>Aurinia</i>	<i>saxatalis</i>	Basket-of-gold	
<i>Baptisia</i>	<i>australis</i>	False Indigo	
<i>Belamcanda</i>	<i>chinensis</i>	Blackberry Lily	
<i>Bergenia</i>	<i>cordifolia</i>	Pigsqueak	
<i>Berlandiera</i>	<i>lyrata</i>	Chocolate Flower	
<i>Boltonia</i>	<i>asteroides</i>	Starflower	
<i>Brunnera</i>	<i>macrophylla</i>	Siberian Forget-Me-Not / Siberian Bugloss	
<i>Callirhoe</i>	<i>involucrata</i>	Poppy Mallow	

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RECOMMENDED PLANT LIST

PERENNIALS

<i>Calylophus</i>	<i>serrulatus</i>	Sundrops	
<i>Calamintha</i>	<i>grandiflora</i>	Beautiful Mint	
<i>Campanula</i>	<i>sp.</i>	Bellflower	
<i>Centaurea</i>	<i>montana</i>	Hardy Bachelor Button	
<i>Centranthus</i>	<i>ruber</i>	Jupiter's Beard	
<i>Cerastium</i>	<i>tomentosum</i>	Snow-In-Summer	
<i>Ceratostigma</i>	<i>plumbaginoides</i>	Leadwort/Plumbago	
		Garden Mum	
<i>Coreopsis</i>	<i>sp.</i>	Tickseed	
<i>Cytisus</i> x 'Lena'	x	Lena Broom	
<i>Delosperma</i>	<i>sp.</i>	Ice Plant	
<i>Delphinium</i>	<i>sp.</i>	Delphinium	
<i>Dianthus</i>	<i>sp.</i>	Pinks	
<i>Diascia</i>	<i>intergerrima</i> 'coral canyon'	Twinspur 'Coral Canyon'	
<i>Digitalis</i>	<i>sp.</i>	Foxglove	
<i>Echinacea</i>	<i>purpurea</i>	Purple Coneflower	
<i>Echinops</i>	<i>ritrp</i>	Globe Thistle	
<i>Epilobium</i>	<i>sp.</i>	Fireweed	
<i>Erigeron</i>	<i>sp.</i>	Daisy Fleabane	
<i>Eriogonum</i>	<i>umbellatum</i>	Sulphur Flower	
<i>Eryngium</i>	<i>amethystinum</i>	Sea Holly	
<i>Euonymus</i>	<i>fortune</i> 'Coloratus'	Purple-leaved Wintercreeper	
<i>Eupatorium</i>	<i>greggii</i>	West Texas Mist Flower	
<i>Euphorbia</i>	<i>epithymoides</i>	Cushion Spurge	
<i>Gaillardia</i>	<i>aristata/grandiflora</i>	Blanketflower	
<i>Galium</i>	<i>odoratum</i>	Sweet Wodruff	
<i>Gaura</i>	<i>lindheimeri</i>	Whirling Butterflies	
<i>Gazania</i>	<i>sp.</i>	Hardy Gazania	
<i>Geranium</i>	<i>sp.</i>	Hardy Granium	
<i>Geum</i>	<i>sp.</i>	Geum	
<i>Goniolimon/limonium</i>	<i>sp.</i>	Statice	
<i>Gutierrezia</i>	<i>sarothrae</i>	Snakeweed	
<i>Gypsophila</i>	<i>sp.</i>	Hardy Baby's Breath	
<i>Hedera</i>	<i>helix</i>	English Ivy	

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RECOMMENDED PLANT LIST

PERENNIALS

<i>Helenium</i>	<i>autumnale</i>	Sneezeweed/Helen's flower	
<i>Helianthemum</i>	<i>nummularium</i>	Sun Rose	
<i>Heliopsis</i>	<i>helianthoides</i>	False Sunflower	
<i>Helleborus</i>	<i>sp.</i>	Lenten Rose	
<i>Hemerocallis</i>	<i>sp.</i>	Daylily	
<i>Heuchera</i>	<i>sanguinea</i>	Coral Bells	
<i>Hosta</i>	<i>sp.</i>	Plaintain Lily	
<i>Hypericum</i>	<i>calycinum</i>	St. John's Wort	
<i>Iberis</i>	<i>sempervirens</i>	Candytuft	
<i>Iris</i>	<i>germanica (hybrid)</i>	Bearded Iris	
<i>Knautia</i>	<i>macedonica</i>	Red Pincushion	
<i>Kniphofia</i>	<i>uvaria</i>	Red Hot Poker	
<i>Lamiastrum</i>	<i>galeobdolon</i>	Yellow Archangel	
<i>Lamium</i>	<i>maculatum</i>	Dead Nettle	
<i>Lavandula</i>	<i>sp.</i>	Lavender	
<i>Lavatera</i>	<i>thuringiaca</i>	Tree Mallow	
<i>Leontopodium</i>	<i>alpinum</i>	Edelweiss	
<i>Leucanthemum</i> <i>x superbum</i>		Shasta Daisy	
<i>Liatris</i>	<i>sp.</i>	Gayfeather	
<i>Linum</i>	<i>perenne</i>	Blue Flax	
<i>Lychnis</i>	<i>chalcedonica</i>	Maltese Cross	
<i>Lychnis</i>	<i>coronaria</i>	Rose Campion	
<i>Mahonia</i>	<i>repens</i>	Creeping Grape Holly	
<i>Malva</i>	<i>alcea</i>	Rose Mallow	
<i>Mirabilis</i>	<i>multiflora</i>	Hardy Four-O-Clock	
<i>Mondard</i>	<i>fistulosa menthaefolia</i>	Native Lavender Bee Balm	
<i>Nepeta x</i> <i>faassenii</i>	<i>sp.</i>	Catmint	
<i>Oenothera</i>	<i>sp.</i>	Evening Primrose	
<i>Origanum</i>	<i>sp.</i>	Oregano/Marjoram	
<i>Osteospermum</i>	<i>sp.</i>	Sun Daisy	
<i>Paeonia</i>	<i>lactiflora</i>	Peony	
<i>Papavar</i>	<i>sp.</i>	Poppies	
<i>Penstemon</i>	<i>sp.</i>	Beardtongue/Penstemon	
<i>Perovskia</i>	<i>atriplicifolia</i>	Russian Sage	

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RECOMMENDED PLANT LIST

PERENNIALS

<i>Persicaria</i>	<i>affinis</i>	Himalayan Border Jewel	
<i>Phlomis</i>	<i>cashmeriana</i>	Jerusalem Sage	
<i>Phlox</i>	<i>subulata</i>	Creeping Phlox	
<i>Platycodon</i>	<i>grandiflorus</i>	Ballon Flower	
<i>Polemonium</i>	<i>caeruleum</i>	Jacob's Ladder	
<i>Potentilla</i>	<i>sp.</i>	Cinquefoil/Potentilla	
<i>Prunella</i>	<i>laciniata</i>	Self Heal	
<i>Pulmonaria</i>	<i>sp.</i>	Lungwort	
<i>Pulsatilla</i>	<i>vulgaris</i>	Pasque Flower	
<i>Ratibida</i>	<i>columnifera</i>	Prairie Coneflower	
<i>Rosmarinus</i>	<i>officinalis</i> 'Arp'	Lemon Rosemary	
<i>Rudbeckia</i>	<i>sp.</i>	Black-eyed Susan	
<i>Salvia</i>	<i>sp.</i>	Silver Sage	
<i>Salvia</i>	<i>officinalis</i>	Garden Sage	
<i>Santolina</i>	<i>sp.</i>	Lavender Cotton	
<i>Saponaria</i>	<i>sp.</i>	Soapwort	
<i>Scabiosa</i>	<i>sp.</i>	Pincushion	
<i>Sedum</i>	<i>sp.</i>	Sedum/Stonecrop	
<i>Sempervivum</i>	<i>sp.</i>	Hen and Chicks	
<i>Solidago</i>	<i>sp.</i>	Goldenrod	
<i>Stachys</i>	<i>lanata</i> (<i>S. byzantina</i>)	Lamb's Ear	
<i>Stanleya</i>	<i>pinnata</i>	Prince's Plume	
<i>Tanacetum</i>	<i>coccineum</i>	Painted Daisy	
<i>Tanacetum</i>	<i>densum amani</i>	Partridge Feather	
<i>Tanacetum</i>	<i>niveum</i>	Snow Daisy	
<i>Thymus</i>	<i>sp.</i>	Creeping Thyme	
<i>Tradescantia</i>	<i>sp.</i>	Spiderwort	
<i>Verbena</i>	<i>canadensis</i>	Verbena	
<i>Veronica</i>	<i>sp.</i>	Speedwell/Veronica	
<i>Vinca</i>	<i>sp.</i>	Myrtle/Periwinkle/Vinca	
<i>Viola</i>	<i>corsica</i>	Corsican Violet	
<i>Waldsteinia</i>	<i>ternata</i>	Barren Strawberry	
<i>Zauschneria</i>	<i>arizonica</i>	Hummingbird Trumpet	
<i>Zauschneria</i>	<i>garrettii</i>	California Fuschia	
<i>Zinnia</i>	<i>grandiflora</i>	Golden Paper Flower	

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT

RECOMMENDED PLANT LIST

VINES

Genus	Species	Common Name	Water Use
<i>Campsis</i>	<i>radicans</i>	Trumpet Vine	THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT
<i>Celastrus</i>	<i>scandens</i>	Bittersweet	
<i>Clematis</i>	<i>sp.</i>	Clematis	
<i>Lonicera</i>	<i>japonica</i>	Honeysuckle Vine	
<i>Fallopia (Polygonum)</i>	<i>aubertii</i>	Silver Lace Vine	
<i>Parthenocissus</i>	<i>quinquefolia</i>	Virginia Creeper	

GROUNDCOVERS

Genus	Species	Common Name	Water Use
<i>Antennaria</i>	<i>rosea</i>	Pink Pussytoes	THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT
<i>Cerastium</i>	<i>tomentosum</i>	Snow-in-Summer	
<i>Delosperma</i>	<i>sp.</i>	Hardy Ice Plant	
<i>Santolina</i>	<i>chamaecyparissus</i>	Lavender Cotton	
<i>Polygonum</i>	<i>affine</i>	Himalayan Fleeceflower	
<i>Sedum</i>	<i>spectabile</i>	Showy Stonecrop	
<i>Sempervirens</i>	<i>sp.</i>	Hens and Chicks	
<i>Thymus</i>	<i>pseudolanuginosus</i>	Wooly Thyme	
<i>Veronica</i>	<i>pectinata</i>	Blue Wooly Speedwell	
<i>Zinnia</i>	<i>grandiflora</i>	Paper Flower	

RECOMMENDED PLANT LIST

ORNAMENTAL GRASSES

Genus	Species	Common Name	Water Use
<i>Agropyron</i>	<i>cristatum</i>	Crested Wheatgrass	
<i>Andropogon</i>	<i>gerardii</i>	Big Bluestem	
<i>Bouteloua</i>	<i>curtipendula</i>	Sideoats Gramma Grass	
<i>Bouteloua</i>	<i>gracilis</i>	Blue Gramma Grass	
<i>Buchloe</i>	<i>dactyloides</i>	Buffalo grass	
<i>Calamagrostis</i>	<i>acutiflora</i>	Feather Reed Grass	
<i>Chasmanthium</i>	<i>latifolium</i>	Northern Sea Oats	
<i>Deschampsia</i>	<i>caespitosa</i>	Hairgrass	
<i>Erianthus</i> (<i>Sacharrum</i>)	<i>ravennae</i>	Hardy Plume Grass	
<i>Festuca</i>	<i>arundinacea</i>	Tall Fescue	
<i>Festuca</i>	<i>ovina glauca</i>	Blue Fescue	
<i>Helictotrichon</i>	<i>sempervirens</i>	Blue Oat Grass	
<i>Imperata</i>	<i>cylindrica</i> 'Red Baron'	Japanese Blood Grass	
<i>Miscanthus</i>	<i>sinensis</i>	Maiden Hair Grass	
<i>Oryzopsis</i>	<i>hymenoides</i>	Indian Ricegrass	
<i>Panicum</i>	<i>virgatum</i>	Switch Grass	
<i>Pascopyrum</i>	<i>smithii</i>	Western Wheatgrass	
<i>Pennisetum</i>	<i>alopecuroides</i>	Fountain Grass	
<i>Pennisetum</i>	<i>setaceum</i> 'Rubrum'	Purple Fountain Grass	
<i>Phalaris</i>	<i>arundinacea</i> 'Picta'	Ribbon Grass	
<i>Schizachyrium</i>	<i>scoparium</i>	Little Bluestem	
<i>Sorghastrum</i>	<i>nutans</i>	Indian Grass	
<i>Spartina</i>	<i>pectinata</i>	Prairie Cordgrass	
<i>Sporobolus</i>	<i>heterolepsis</i>	Prairie Dropseed	
<i>Stipa</i>	<i>Sp.</i>	Feather/Needle Grass	

THIS COLUMN WILL BE COMPLETED AT FINAL DRAFT



LAND USE CODE UPDATE

Joint Work Session - Board of Trustees and Planning Commission
15 February 2022

AGENDA

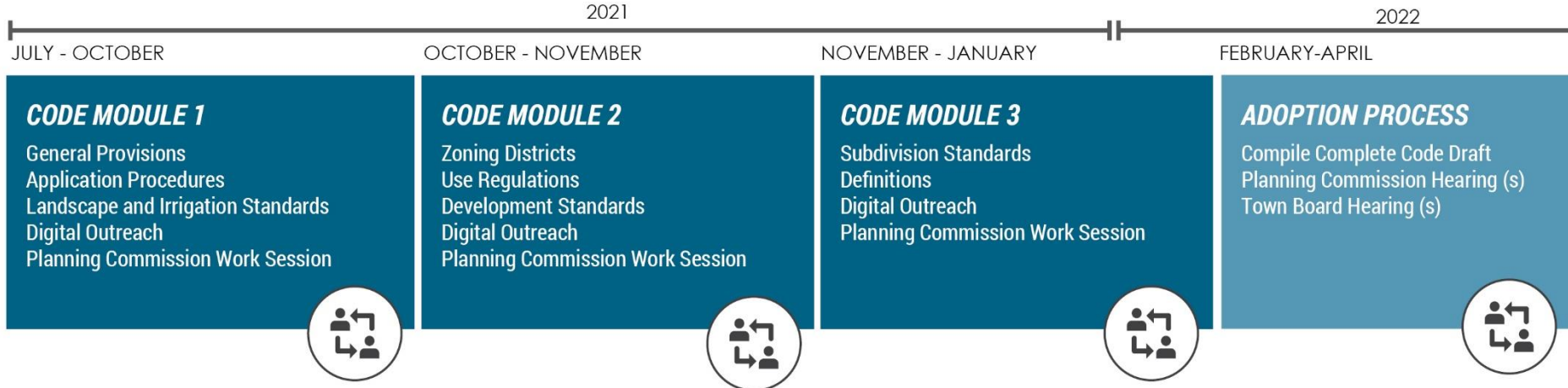
- ❑ Process Overview
- ❑ Reorganization of Articles
- ❑ Overview of Specific Changes
- ❑ Next Steps

Process Overview

Summer 2020: Stakeholder Interviews

Dec 2020: Completed Code Assessment

Spring 2021: Kicked off Landscape and Irrigation Standards



Reorganization

Existing structure	Proposed structure within new unified Land Use Code
Chapter 15 – Annexation	Chapter 1 – General Provisions
Chapter 16 – Zoning (Includes Definitions, Design Standards, Nonconformities, Zoning Districts, Specific Use Regulations, Signs)	Chapter 2 – Application Procedures
	Chapter 3 – Zoning Districts
	Chapter 4 – Use Regulations
Chapter 17 - Subdivisions	Chapter 5 – Development Standards
	Chapter 6 – Subdivision Regulations
	Chapter 7 - Nonconformities
	Chapter 8 – Floodplain Regulations
	Chapter 9 - Definitions

Chapter 1 - General Provisions

- ❑ Largely new information clarifying purpose, organization, authority, effective date, and applicability of the Land Use Code.
- ❑ Added reference to relationship of the Comprehensive Plan and other ordinances.

Chapter 2 - Application Procedures

- ❑ Consolidated all application procedures from other sections.
- ❑ Added an overall purpose and organization section.
- ❑ Incorporated a new decision-making authorities and public notice table.
- ❑ Developed a General Application Procedures section.
- ❑ Added specific application procedures for application types that are not detailed in current code.
- ❑ Expanded on application procedures for appeals.

Chapter 3 - Zoning Districts

- ❑ Updated purpose statements of all zone districts
- ❑ Renamed R-1 Residential Rural Density
- ❑ Renamed R-2 Residential Low Density
- ❑ Combined R-3 with R-4 and renamed Residential Medium Density
- ❑ Defined new R-4 Downtown Neighborhood
- ❑ Moved dimensional standards tables from Article 6

Chapter 4 - Use Regulations

- ❑ Combined use regulations from articles 9, 11, 12, 13, 13.5, and 16.
- ❑ Combined all uses from Zone District Article into a table.
- ❑ Allocated each land use in the use table by land use categories.
- ❑ Proposed new use-specific regulations to mitigate potential adverse development impacts on surrounding properties.
- ❑ Established temporary and accessory uses sections.

Chapter 5 - Development Standards

- ❑ Combined regulations from Articles 3 and 14, and design standards from Subdivisions.
- ❑ Revised sign code to be compliant with content neutrality and First Amendment case law.
- ❑ Revised sign types and their allocations to improve development certainty.
- ❑ Used regional and national best practices to create context-sensitive parking regulations.
- ❑ Minimum parking ratios provided for each land use.

Chapter 5 - Development Standards

- ❑ Provided downtown specific parking approach.
- ❑ Added loading regulations.
- ❑ Strengthened lighting standards to reduce light pollution and protect dark sky preferences.
- ❑ Improved landscaping regulations per the recent Waterwise Landscape and Irrigation Design Manual.
- ❑ Added new graphics and tables to improve code readability.

Chapter 6 - Subdivision Regulations

- ❑ Cleaned up language and formatting to improve readability.
- ❑ Moved application procedures to Chapter 2.
- ❑ Moved Streets, landscaping, and transportation and connectivity to Development Standards.
- ❑ Added clarifying language for open space dedication.

Chapter 7 - Nonconformities

- ❑ Mostly new language that clarifies certain development situations prior to the effective date of the Land Use Code.
- ❑ Strengthened limited existing nonconformity regulations.

Chapter 8 - Floodplain Regulations

- ❑ Kept the bulk of the original language as it is required to meet state and federal standards.
- ❑ Cleaned up formatting for ease of use.

Chapter 9 - Definitions

- ❑ Removed irrelevant terms.
- ❑ Updated outdated terms.
- ❑ Add new terms relevant to new language.
- ❑ Removed any standards that were buried in definitions.

Next Steps

- ❑ Full draft available on Town website
- ❑ Public comments welcomed and encouraged via online fillable comment form on Town Website
- ❑ Upcoming opportunities for discussion and public comment:
 - Feb 15 – Joint Work Session
 - March 7 – Planning Commission Public Hearing
 - March 8 – Board of Trustees Presentation of Revised Draft
 - March 15 Board of Trustees Work Session
 - March 22 – Board of Trustees Public Hearing

Board of Trustees Meeting

Date: February 15, 2022
Submitted By: Dave Myer, Engineer
Subject: Wastewater Treatment Plant CMAR Contract Amendment for Guaranteed Maximum Price (GMP) - Discussion

- **Presentation: Dave Myer, Engineer**

EXECUTIVE SUMMARY

The 90 percent cost estimate received from the CMAR Contractor (Moltz Construction) for Wellington's Wastewater Treatment Plant expansion will be presented along with the draft contract amendment for Phase 2 Construction based on the Guaranteed Maximum Price.

BACKGROUND / DISCUSSION

The 90 percent design package (drawings and specifications) was received on schedule from Jacobs on December 3, 2021. Immediately after, Moltz began preparation of the 90 percent cost estimate as part of its pre-construction services for the Town.

Moltz submitted an initial 90 percent cost estimate of \$45,821,656 (without contingency) on schedule on January 7, 2022. Numerous value engineering (VE) items were identified within that submittal. The design team (Moltz, Jacobs, Town Staff) discussed all items in numerous workshops throughout January, investigating all VE options and scope change considerations line by line. Many engineering items were reevaluated, equipment options were investigated, alternative construction products were discussed, and instrumentation packages were scrutinized, all in an effort to obtain cost savings. Town staff and Jacobs conducted interviews and in-person site visits to explore alternative equipment. This exercise concluded with Moltz's revised cost estimate of \$43,546,349 that was received on February 10, representing the Guaranteed Maximum Price (GMP) for construction. Adding a 5% Contractors contingency and a 5% Owner's Contingency (totaling \$4,354,634) brings the total price for Phase 2 Construction to \$47,900,984.

Most of the cost increases can be attributed to three reasons: additions to the design scope and specifications from the 60 percent level; substantial increase in materials pricing and labor (rebar, metal buildings, fuel, electrical, piping, hourly labor rates, etc.); and, most impactfully, supply chain issues along with the American Iron and Steel and Davis Bacon (DB) wage obligations per State Revolving Fund (SRF) requirements. Electrical prices have risen substantially from a few months ago and steel commodity prices are very high. DB labor wages have also considerably increased.

Moltz used a competitive bidding process for the 90 percent cost estimate. In most cases, three bids were received for subcontractors and equipment, and material suppliers. The majority of the bids for each item were within ten percent of each other, indicating the drawings and specifications were well-understood and interpreted the same way. Moltz asked bidders to hold prices for 90 days, but many were not able to do that due to market and supply-chain volatility. Therefore, to minimize cost escalations, Moltz would need to execute subcontracts and purchase orders in March.

Moltz prepared a construction schedule that now shows the Substantial and Final Completion dates as August 1, 2024, and October 30, 2024, respectively. This three-month extension from previously defined completion



dates was needed to reduce laborers' overtime hours, which would have substantially increased the cost. Moltz has indicated, however, most plant facilities would be online by June 1, 2024, pending favorable progress and an early notice to proceed.

On June 25, 2021, a Board-approved contract was executed with Moltz for Phase 1, Preconstruction Services. That contract included an Agreement (EJCDC C-525) and General Conditions (EJCDC C-700). The contract for Phase 2 Construction based on the GMP is considered an amendment to the existing contract and includes the following attached documents:

- Contract Amendment (cover sheet with signature line)
- EJCDC Change Order Form (C-941) (with additional signature line)
- Moltz's GMP Package, which defines GMP as \$43,546,349, adding \$4,354,634 in contingency money, brings the total Phase 2 cost to \$47,900,984.

The 90% drawings and specifications (including Supplemental Conditions) would also become part of this contract amendment which are available on the Town's website. Note that Supplemental Conditions are being finalized at this time.

Upon execution of this contract amendment, Moltz will proceed to execute subcontracts and issue purchase orders to lock in prices. SRF loan approval is expected from Colorado Water Resources and Power Development Authority on their March 4 meeting. A notice to proceed can be issued to Moltz shortly after, pending approval by CDPHE Grants and Loans Unit. The next steps for Jacobs involve completion of the 100% drawings and specifications which are scheduled for delivery on April 7.

STAFF RECOMMENDATION

ATTACHMENTS

1. Wellington WWTP GMP Contract Amendment 1 DRAFT
2. Wellington WWTP EJCDC Form and Moltz GMP Package DRAFT
3. Wellington WWTP Supplemental Conditions DRAFT

Wellington WWTP Expansion

Cost Impacts from Davis Bacon (DB) Wage Requirements

Usually, DB adds about \$2 per hour to crew wages. However, latest requirements (used for the 90% cost estimate) raised those rate increases closer to \$4 per hour.

Moltz estimated that DB requirements added about \$1.6M to the 90% cost estimate, inclusive of Moltz's wages and subcontractor wages.

The 60% cost estimate covered about half that amount.



Build American Buy American
requirements (June 2022) will be
much more stringent!

Wellington WWTP Expansion

Cost Impacts from American Iron & Steel Requirements

AIS requirements include 30-35% increase in Ductile Iron Pipe; 25-30% in Steel Pipe; 30-35% on Bolts; 1-2% on Metal Building; 5% on Rebar; 30-40% on Electrical Conduit; 25% on Pipe Supports; 25% on Anchors; 20% on Valves; and 25% on Metal Fabrications.

Pipe AIS adds about \$495,000 range

Steel Pipe AIS adds about \$93,000

Bolt kits for pipe AIS adds about \$104,000

Metal Building AIS adds about \$15,000

Rebar AIS adds about \$70,000

Electrical Conduits, anchors, Supports AIS adds about \$200,000

Pipe Support AIS adds about \$80,000

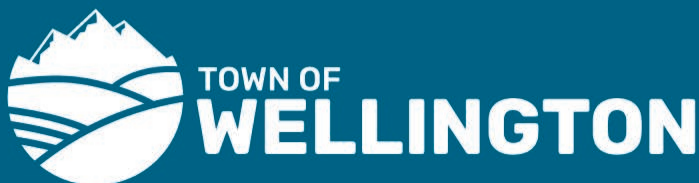
Valves AIS adds about \$130,000

Metal Fabrications AIS adds about \$310,000

HVAC and Plumbing AIS adds about \$125,000

Anchors AIS adds about \$40,000

Total estimated AIS adds \$1,662,000



**Build American Buy American
requirements (June 2022) will be
much more stringent!**

WWTP Expansion
Project Timeline (Through February 2022)

Date	Item
April 11, 2019	WWTP & Sewer Master Plan RFQ
May 20, 2019	Master Plan RFP
July 23, 2019	Master Plan Contract (Jacobs) Board Approval
August 6, 2019	Master Plan Contract Sign & NTP (Jacobs)
September 15, 2020	WWTP Master Plan Board Presentation (Work Session)
November 10, 2020	Wastewater Utility Plan Contract (Jacobs) Board Approval
November 17, 2020	Project Update Board Presentation (Work Session)
November 20, 2020	CMAR Contractor RFP
December 8, 2020	Engineering Contract (Jacobs) Board Approval
January 27, 2021	CMAR Contractor Interviews
February 3, 2021	CMAR Selection Committee Decision (Moltz)
February 23, 2021	Project Update & CMAR Board Presentation
April 1, 2021	SRF Loan Prequalification Submitted
May 27, 2021	SRF Loan Prequalification Meeting (CDPHE)
June 15, 2021	30% Cost Estimate (Work Session)
June 22, 2021	CMAR Contract Phase 1 (Moltz) Board Approval
July 2, 2021	SRF Loan Prequalification Approval
July 13, 2021	WWTP Master Plan Final Report Received
July 28, 2021	Prelim. Effluent Limts (PEL) Received (CDPHE)
October 12, 2021	60% Cost Estimate (Work Session)
December 9, 2021	Wastewater Utility Plan Meeting & Approved (NFRWQPA)
January 11, 2022	Project Needs Assessment Approved (CDPHE)
January 11, 2022	Public Meeting for Environmental Assessment & SRF Loan
January 14, 2022	SRF Loan Application Submitted
January 18, 2022	Site Application Approved (CDPHE)
January 25, 2022	Process Design Report Submitted (CDPHE)
February 15, 2022	90% Cost Estimate and GMP Discussion (Work Session)
February 22, 2022	Phase 2 Construction Contract & GMP Board Approval



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WELLINGTON WASTEWATER TREATMENT PLANT EXPANSION CMAR CONSTRUCTION SERVICES

Phase 2 - Construction Services

AMENDMENT ONE TO CONTRACT FOR SERVICES, GL No. 211-80-4061

Parties. The parties to this Amendment are the Town of Wellington, 3735 Cleveland Avenue, Wellington, Colorado 80549 (Town) and Moltz Construction, Inc., 975 Merchant Court, Windsor, CO, 80550 (Contractor).

Purpose of Amendment. This Amendment constitutes the first amendment to the Agreement Between Owner and Contractor for Construction Contract (Cost-Plus) between the Town and the Contractor. This Amendment is for Moltz to proceed with Phase 2 – Construction Services pursuant to the agreed upon Guaranteed Maximum Price (GMP) and further provisions of this Amendment.

The original Contract, effective June 25, 2021, is for Preconstruction Services (Phase 1) as defined in Section 101 of the existing Agreement for the expansion of Wellington's Wastewater Treatment Plant (WWTP) for a total Contract amount of one hundred twenty-seven thousand two hundred four dollars and no cents (\$127,204.00). On the effective date of Amendment 1, the total Contract amount will be amended to forty-eight million twenty-eight thousand one hundred eighteen dollars and no cents (\$48,028,118.00).

Term of the Amendment. This Amendment shall commence upon the date the last required signature is affixed hereto (Effective Date) and shall remain in full force through the term of the Contract, as amended, unless terminated at an earlier date pursuant to the provisions of the Contract.

Amendment(s).

1. Amendment to the EJCDC C-525 Agreement Between Owner and Contractor for Construction Contract (Cost-Plus), dated June 25, 2021, between Town of Wellington, Colorado, a Colorado Statutory Town and Moltz Construction, Inc., a Colorado Corporation.
2. Amendment to the Contract to include Phase 2 construction services and establish the Guaranteed Maximum Price for the Construction Services, according to EJCDC C-525 Sections 1.02.
3. Amendment to Paragraph 4.02 Contract times for Construction service to be substantially complete by August 1, 2024, and ready for final payment in accordance with Paragraph 15.06 by October 30,

2024. Assumed a notice of award of contract no later than April 1, 2022, and a notice to proceed date not later than May 1, 2022.

4. Amendment to Paragraph 6.02 Phase 2 Guaranteed Maximum Price for Phase 2 construction services will be \$43,546,349.00. The GMP price is based on the assumptions, clarifications, and value engineering spreadsheet per Attachment 1 (GMP package) and on Jacobs Engineering Group Wellington WWTP Expansion 90 percent drawings, specifications, and addendums nos. 1-3 per Attachment 2. Adding Owner and Contractor contingencies of 5 percent each to the GMP bring the total Phase 2 project cost to \$47,900,984.
 - a Attachment 1: 90% Drawings and Specifications Dated December 2021.
 - b Attachment 2: GMP Package Dated February 10, 2022.

Same Terms and Conditions. Except for items explicitly delineated in this Amendment, all terms and conditions of the original Contract, and any previous amendments, between the Town and the Contractor, remain unchanged and in full force and effect.

Entirety of Contract. The original Contract, consisting of seventy-two (72) pages and this Amendment One, consisting of **ten (TBD) pages** (including attachments), represent the entire and integrated Contract between the parties.

Signatures. The parties to this Amendment, through their duly authorized representatives, have executed this Amendment on the dates set out below and certify that they have read, understood, and agreed to the terms and conditions of this Amendment.

DRAFT
Not for Signing

TOWN OF WELLINGTON

Signature

Date

Printed Name

Title

MOLTZ CONSTRUCTION, INC.

Signature

Date

Printed Name

Title

Date of Issuance: 2-10-2022
Owner: Town of Wellington
Contractor: Moltz Construction Inc.
Engineer: Jacobs Engineering
Project: Wellington WWTP Expansion Project

Effective Date: 3-1-2022
Owner's Contract No.:
Contractor's Project No.: 2115 Wellington WWTP
Engineer's Project No.:
Contract Name: Wellington WWTP Expansion Project

The Contract is modified as follows upon execution of this Change Order:

Description: Approval of Phase 2 Construction Services for the Wellington WWTP Expansion Project

Attachments: Amendment #1 Phase 2 Construction Services Guaranteed Maximum Price Amendment
Attachment #1 90% Plans and Specs dated December 2021: Attachment #2 GMP Package Dated 2-10-2022
(Updated Schedule required for any change in Contract Time)

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ <u>\$127,204.00</u>	Original Contract Times: Substantial Completion: <u>N/A for Phase 1</u> Ready for Final Payment: <u>N/A for Phase 1</u> days or dates
[Increase] [Decrease] from previously approved Change Orders No. <u> </u> to No. <u> </u> : \$ <u>0</u>	[Increase] [Decrease] from previously approved Change Orders No. <u> </u> to No. <u> </u> : Substantial Completion: <u>N/A</u> Ready for Final Payment: <u>N/A</u> days
Contract Price prior to this Change Order: \$ <u>\$127,204.00</u>	Contract Times prior to this Change Order: Substantial Completion: <u>N/A</u> Ready for Final Payment: <u>N/A</u> days or dates
[Increase] [Decrease] of this Change Order: \$ <u>Increase of \$47,900,984.00</u>	[Increase] [Decrease] of this Change Order: Substantial Completion: <u>8-1-2024</u> Ready for Final Payment: <u>10-30-2024</u> 823 days Sub, 913 days final days or dates
Contract Price incorporating this Change Order: \$ <u>\$48,028,118.00</u>	Contract Times with all approved Change Orders: Substantial Completion: <u>8-1-2024</u> Ready for Final Payment: <u>10-30-2024</u> days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____



ATTACHMENT 2

TOWN OF WELLINGTON WATER RECLAMATION FACILITY PHASE 3 IMPROVEMENTS AND EXPANSION

Final 90% DESIGN LEVEL COST ESTIMATE

Dated 2-10-2022

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Vendor and Subcontractor Quotes.....	Tab 6
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Schedule.....	Tab 8



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General Contractor/Construction Manager

www.moltzconstruction.com

**TOWN OF WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 IMPROVEMENTS AND EXPANSION
90% Design Level Cost Estimate
February 10, 2022**

Construction Costs		
01 General Requirements	\$	2,718,875
02 Existing Conditions	\$	374,537
03 Concrete	\$	8,394,514
04 Masonry	\$	396,198
05 Metals	\$	1,569,012
06 Woods, Plastics, & Composites	\$	82,886
07 Thermal & Moisture Protection	\$	287,645
08 Openings	\$	396,798
09 Finishes	\$	1,098,572
10 Specialties	\$	70,325
12 Furnishings	\$	4,062
13 Special Construction	\$	1,865,289
22 Plumbing	\$	733,600
23 HVAC	\$	1,745,245
26 Electrical	\$	7,752,920
31 Earthwork	\$	2,688,790
32 Exterior Improvements	\$	49,064
33 Utilities	\$	126,739
35 Waterway and Marine Construction	\$	253,954
40 Process Interconnections	\$	6,336,357
41 Material Processing and Handling Equipment	\$	321,526
44 Pollution and Waste Control Equipment	\$	5,332,131
Total Construction Costs*	\$	42,599,039
VE Savings (Included in Total Construction Costs)	\$	2,115,286
Subtotal	\$	40,483,753
Construction Manager Fee	6.50%	\$ 2,631,444
Subtotal		\$ 43,115,197
Bonds & Insurance	1.00%	\$ 431,152
GMP Amount		\$ 43,546,349
Contractor's Contingency	5.00%	\$ 2,177,317
Owner's Contingency	5.00%	\$ 2,177,317
GMP INCLUDING Contingency		\$ 47,900,984

*Includes Labor Burden and Small Tools



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General Contractor/Construction Manager

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TOWN OF WELLINGTON WATER RECLAMATION FACILITY PHASE 3 IMPROVEMENTS AND EXPANSION

Assumptions, Clarifications, & Exceptions

January 27, 2022 – 90% Design Level

1. Please note that the construction material markets are very volatile right now (Wood, Steel, Pipe and Commodities). Moltz did our best to get good numbers and estimate standard increases over the next year.
2. GPM is based on the attached schedule. Notice to Proceed May 2, 2022. Substantial Completion August 1, 2024. Final Completion October 30, 2024.
3. Moltz has not included any on-site third-party materials testing or special inspections
4. Moltz does not include the cost of building permits. We do have dewatering and stormwater permit costs included.
5. Moltz has included a 1-year warranty per General Conditions Section 15.08 of the Executed Agreement signed June 25, 2021. Unless otherwise stated in specific specification section.
6. Assumed Town will remove desks and loose items from existing lab.
7. Startup Chemicals and Totes by Owner.
8. General clarification regarding catchall/turnkey language: We have included what is outlined in the construction documents and have a current knowledge of industry and local practices relative to this project. Depending on the significance of any unforeseen issues which may arise could require use of contingency funds to address.
9. Water Softener included is Labconco, dispensing gun and filter kit included.
10. We are carrying \$30,000 for furnishings and appliances.
11. Specification 40 27 00 Section 3.21 states "Immediately after cleaning service piping, dry to minus 40 degrees F dew point with dry compressed instrument air or compressed commercial grade nitrogen." Moltz does not include this service. Moltz will flush and clean process pipe per standard practices.
12. Moltz Construction did not include Painting PVC Pipe. We will Label with Stickers.
13. Moltz is in the base bid with Tolin Mechanical for the HVAC scope of work. It would be an additional \$180,000 to go with Horizon Mechanical Solutions.
14. Moltz is in the base bid with Strait Mechanical for the Plumbing scope of work.
15. Moltz is in the base bid with Interstates Inc. for the Electrical and I&C scope. It would be an additional cost to go to go with Weifield Group or Eckstine. Please note that all bidders had the Hach Instruments and the required 3 year service contract. The service contract added an additional \$250,000 to the instrument quote.
16. In a pipe encasement situation, all pipes will extend 1 foot past the concrete encasement followed by a solid sleeve, in lieu of using 4027-601, wall pipe detail.
17. Concrete pavement is estimated at 8" thick with 6" base under pavement with no thickened edges.
18. Due to the amount of paving on this project concrete paving is placed using spec 033000 not 321313 to be cost effective
19. Moltz did not include sludge removal or cleaning of basins during construction.
20. All sidewalks are placed at 6" thick with 6" base underneath. No thickened edges.

21. Moltz is not including any Landscaping. Moltz did include dryland seeding and reclamation of all areas and minor irrigation to get seeding established.
22. Moltz did not include any bonding agent at fill concrete. Moltz will roughen clean and pressure wash areas to receive.
23. Moltz has assumed all spoils can be left on site. Moltz has included placing spoils in a berm and seeding all disturbed areas.
24. Moltz has included touching up entrance road and site roads with 3" of road base upon completion of the project.
25. Moltz has assumed we can utilize on site power and water at no charge. Moltz will provide backflow measures for water and any electrical equipment need during construction, but we are not carrying any usage fees or any separate power drop.
26. Moltz has included a job site trailer for an on-site resident engineer
27. Assuming structural masonry bond beams every 4 feet per detail 0422-004
28. Assuming all pumps have paint/coating from manufacturers.
29. Assuming we are not damp proofing/waterproofing under slabs except where Bentonite Waterproofing is required.
30. Assuming the only lines getting insulation and heat trace are interior ALP blower piping 8' and below in step feed process building and UV blower building, and the exterior glycerin lines above grade at the Orbal ditch and step feed aeration basins.
31. Assuming CRC coating is only required at the influent box of the influent pump station and at the FC injection point in headworks.
32. Assuming all metal building panels are PBR style panels to match existing metal building profile.
33. Assuming all pipe comes from the factory primed and ready to be painted onsite with minimal prep work required.
34. Assuming use of epoxy coating system per subcontractor recommendation on Sheet 750-A-1010 note 1
35. Assuming HDG primary and secondary structural members on all pre-engineered metal buildings and no painting or coating will be applied in the field.
36. Assuming EPDM roof will be 60mil BLACK reinforced Versico roof in lieu of white. White is not available reinforced.
37. Assuming owner pays for all 3rd party testing including NACE inspection on paintings and coatings including CRC and High build epoxy, and as stated in Spec 09 90 00 Part 3 Execution 3.04 B Chlor Test Surface contamination testing.
38. Assuming no painting of PVC piping
39. Assuming no painting or coatings on buried or encased piping
40. We have not included the Utility Transformers, meter cabinets, or wire to Xcel transformers as they will be furnished and installed by Xcel. Cost of incoming service by Others.
41. Moltz has assumed in plant lift station pumps will be reused.



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TOWN OF WELLINGTON WATER RECLAMATION FACILITY

PHASE 3 IMPROVEMENTS AND EXPANSION

Value Engineering Tracking

February 4, 2022

					Accepted By:			Notes
Description					Wellington	Jacobs	Moltz	
1	In lieu of 6" conduit with innerduct, use (3) 2" conduits for the fiber backbone, preserving the possibility to add (2) fibers in the future.	\$ (25,000.00)	\$ (25,000.00)	Accept				
2	Remove requirements for UL2085 and reduce to UL142 (This is OK) for generator	\$ (70,100.00)	\$ (70,100.00)	Accept				
3	Amount of spare conduits in duct banks is excessive, Reduce spares by 50%.	\$ (42,000.00)		Review				Provide Savings throughout Construction. Look at on case by case.
4	Delete Bentonite Waterproofing System	\$ (134,925.00)	\$ (134,925.00)	Accept				
5	Moltz provided SST Pipe Supports on Digesters, Change to HDG	\$ (86,600.00)	\$ (86,600.00)	Accept				
6	Delete Epoxy Injection requirement on water testing. Seal cracks during water testing with a urethane grout system.	\$ (83,712.00)	\$ (58,712.00)	Accept				Minimize Epoxy Injection
7	Delete grout slurry requirement for grouting bottom of walls with water stop prior to concrete placement.	\$ (44,926.00)	\$ (44,926.00)	Accept				
8	Delete Bonding agent and special roughen of taper ties. Moltz is still installing rubber taper tie plug and grouting both sides of taper ties.	\$ (33,772.00)	\$ -	Decline				Bonding Agent is needed per Structural Engineering
9	Place clarifier base slabs in one placement	\$ (9,305.00)	\$ (9,305.00)	Accept				
10	Delete requirements and paperwork requirements for full time on site QC person	\$ (122,304.00)	\$ (122,304.00)	Accept				
11	Place 6" Base at new road based roads instead of the 9"	\$ (6,592.00)	\$ (6,592.00)	Accept				
12	Place Squeegee in fill areas at the lower level of the headworks in place of foam Void	\$ (25,605.00)	\$ (10,080.00)	Accept				Per Jacobs email 1/24 - Partial Accecpt, recommendation from geotech report & engineering
13	Place shake on Dye at duct banks in place of integral red dye	\$ (22,897.00)	\$ (22,897.00)	Accept				
14	Delete road base requirement under concrete encased duct bank per the standard detail	\$ (8,308.00)	\$ -	Decline				Engineering recommends keeping after reviewing geotech report
15	Delete Xcel duct banks for primary service (Addendum #2 states for contractor to install conduit & hand holes).	\$ (51,000.00)	\$ (51,000.00)	Accept				
16	Replace half of the concrete paving area near Step feed and headworks with asphalt paving	\$ (51,000.00)	\$ (51,000.00)	Accept				Review and Layout with Mike/Town Staff
17	Delete over excavation at step feed basement	\$ (15,000.00)	\$ -	Decline				Engineering recommends keeping after reviewing geotech report
18	All sleeves 14" and smaller be plastic vs SST	\$ (34,000.00)	\$ (34,000.00)	Accept				
19	Install copper compressed air lines in lieu of SST 2" AHP	\$ (50,000.00)	\$ -	Decline				Longevity and Safety concerns
20	Delete Clarifier Launder Covers and try to use contingency, if available	\$ (114,000.00)	\$ (114,000.00)	Accept				May be added back into the Project if Contengency allows
21	Delete the sloped concrete at the bottom of the digester 5/6	\$ (20,000.00)	\$ -	Decline				Longterm reduction in maintenance labor/costs and Safety concerns
22	Delete Ball Joints at meter vault and replace with double solid sleeve	\$ (16,000.00)	\$ (16,000.00)	Accept				
23	Change 4" NPW Line in Headworks from Ductile to Sch. 80 PVC. Does this need to be 4"?	\$ (45,000.00)	\$ (45,000.00)	Accept				Jacobs will review size
Subtotal Adjustment to Costs Subject to Contractor's Fee		\$	(902,441.00)					



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TOWN OF WELLINGTON WATER RECLAMATION FACILITY

PHASE 3 IMPROVEMENTS AND EXPANSION

Value Engineering Tracking

February 4, 2022

					Accepted By:			Notes
Description		Estimated	Final	Action	Wellington	Jacobs	Moltz	
24	Delete bell restraints on C900 gravity lines	\$ (45,000.00)	\$ (45,000.00)	Accept				
25	CML or C900 in lieu of ceramic on RS lines & remove ceramic lining from ALP lines	\$ (60,000.00)	\$ (60,000.00)	Accept				No lining needed for ALP lines, C900 acceptable for RS Lines
26	Change SST dumpster rails & guides to HDG	\$ (58,450.00)	\$ -	Decline				HDG will not hold up as long and could create possible in-operation
27	Delete plumbing drain line encasement at UV, Step Feed, and Admin	\$ (62,000.00)	\$ (62,000.00)	Accept				
28	Remove trap primers at Admin	\$ (5,000.00)	\$ (5,000.00)	Accept				
29	Modify belt press building conversion from scope to only incl. removal of equip. & disconnect of electrical	\$ (80,000.00)	\$ (80,000.00)	Accept				May be added back into the Project if Contengency allows
30	Delete existing RAS/WAS Conversion from scope	\$ (418,734.00)	\$ -	Decline				Safety concerns; reduction in maneuverability, access, and efficiency if not completed
31	Delete furnishings allowance from scope	\$ (30,000.00)	\$ (30,000.00)	Accept				May be added back into the Project if Contengency allows
32	Delete ionized water system in scope of work	\$ (9,000.00)	\$ -	Decline				Needed for Laboratory Testing per State Requirements
33	Switch from Huber to BDP Dewatering Presses; must use Suez UV	\$ (55,000.00)	\$ (55,000.00)	Accept				
34	Switch from Huber to Swing Dewatering Presses	\$ (50,000.00)		Decline				Took larger savings by going with BDP on number 33
35	Switch from Neuros Turbo Blowers to Aerzen Turbo Blowers, only if Ovivo screens, Aerzen PD blowers, Velodyne and Enviromix Compressed Gas are still being selected (currently all low)	\$ (80,000.00)	\$ -	Decline				Longevity of equipment and future cost savings from a maintenance standpoint
36	Switch from Neuros to Lonestar Turbo Blowers	\$ (65,000.00)	\$ -	Decline				Longevity of equipment and future cost savings from a maintenance standpoint
37	Switch from Blue-White Chemical Feed Systems to Watson-Marlow	\$ (14,000.00)	\$ (14,000.00)	Accept				
38	Utilize Red Valve non AIS and EDI	\$ (47,900.00)		Decline				Item 38, 39 or 40 can be deducted, not multiple, Accepted line item 39 or 40
39	Utilize Red Valve non AIS with 1 Header and EDI	\$ (91,600.00)	\$ (91,600.00)	Accept				Item 39, 40 or 41 can be deducted, not multiple
40	Utilize Aquarius	\$ (204,950.00)		Review				Item 39, 40 or 41 can be deducted, not multiple, reviewing Flexcap design from Aquarius for additional savings
41	Switch from Flygt NPW Pump System to KSB NPW Pump System	\$ (45,000.00)	\$ (45,000.00)	Accept				Review Sulzer Curve for possible additional savings
42	Delete spare parts for Rotary Lobe Pumps	\$ (15,000.00)		Decline				Requires specialty tools and rebuild kits that are required
43	Switch from Boerger Pumps to Vogelsang Pumps	\$ (20,000.00)	\$ (20,000.00)	Accept				
44	OzzyCup - Eliminate (1) Control Panel, Utilize Radar	\$ (80,000.00)	\$ (80,000.00)	Accept				
45	OzzyCup - The original budge price included 1 trip of 3 days and the spec calls for 2 trips and 5 days. Deudct to go back to 1 trip and 3 days	\$ (9,000.00)	\$ (9,000.00)	Accept				
46	OzzyCup - The original budget proposal included a standard 1-year warranty. The spec calls for two years. Deduct to go back to 1 year.	\$ (15,000.00)	\$ -	Decline				More beneficial in long term to keep 2 year warranty
47	Ovivo Package Deduct	\$ (82,000.00)	\$ (82,000.00)	Accept				
48	Delete Screw Press Platform	\$ (49,800.00)	\$ -	Decline				Safety concerns, access
49	Delete Cross Over Stairs on Digester	\$ (4,000.00)	\$ -	Decline				Safety concerns, access

Total Adjustment to Costs Subject to Contractor's Fee \$ (1,581,041.00)

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975 Merchant Court
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TOWN OF WELLINGTON WATER RECLAMATION FACILITY**PHASE 3 IMPROVEMENTS AND EXPANSION****Value Engineering Tracking**

February 4, 2022

					Accepted By:			Notes
Description		Estimated	Final	Action	Wellington	Jacobs	Moltz	
50	Reduce Feeder size from 550-GEN-01 to ATS.	\$ (16,042.00)	\$ (16,042.00)	Accept				Leave 100 as is, 550 can be reduced
51	Eliminate Perimeter Site Lighting excluding (2) parking lot lights & (1) at entry gate	\$ (23,321.00)	\$ (23,321.00)	Accept				
52	Remove Expansion/ Deflection fittings from duct banks into Structures and Manholes. These are already doweled in.	\$ (17,234.00)	\$ (17,234.00)	Accept				
53	Change Aluminum Checkered plate at Headworks Channels to Grating with Mat	\$ (30,000.00)		Decline				Safety Concerns, longevity of mat system
54	Delete Stained Concrete at Headworks to match Veneer	\$ (6,415.00)	\$ (6,415.00)	Accept				
55	Delete painting interior concret walls at headworks	\$ (22,485.00)	\$ (22,485.00)	Accept				
56	Delete painting interior walls at step feed basement	\$ (11,675.00)	\$ (11,675.00)	Accept				
57	Add CRC Coating to Influent Manhole	\$ 13,500.00	\$ 13,500.00	Accept				Needed per Engineering, longetvity of manhole
58	Remove motorized inlet/outlet louvers & space heater from Gensets	\$ (9,000.00)	\$ (9,000.00)	Accept				
59	Change from Insulated Metal Building Panels to un-insulated panel with roll insulation	\$ (135,000.00)	\$ (135,000.00)	Accept				
60	Use standard gland accessories in lieu of Cor-Blu	\$ (30,000.00)	\$ (30,000.00)	Accept				Need to be AWWA Approved
61	Delete (2) Years of Hach Maintenance Package, contract carried by Interstates	\$ (101,822.00)	\$ (101,822.00)	Accept				
52	Updated/Revised Hach, I&C, & Electrical Package	\$ (174,751.00)	\$ (174,751.00)	Accept				
63								
64								
65								
66								
67								
68								
69								
70								
71								

Total Adjustment to Costs Subject to Contractor's Fee \$ (2,115,286.00)



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TOWN OF WELLINGTON WATER RECLAMATION FACILITY PHASE 3 IMPROVEMENTS AND EXPANSION

Constructability Items

January 27, 2022 – 90% Design Level

1. Move influent Manhole to North to avoid under cutting manholes and yard lines near existing headworks.
2. Keep 16" ML line shallow by step feed to make sure if any issues with that pipe building does not get under cut.
3. 12" walls on Aeration basin interior 22' high can cause issues with consolidation may want to make 14"
4. Expansion Joint on wet walls at aeration.
5. Pushing dumpster through conveyor supports.

DRAFT

Not for Signing



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**TOWN OF WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 EXPANSION AND IMPROVEMENTS
30%, 60% to 90% Cost Comparison (before VE)**

January 27, 2022

Description	30%	60%	90%/Final	60% to 90%	Notes
01 General Requirements	\$ 2,432,372.00	\$ 2,432,260.00	\$ 2,718,875.00	\$ 286,615.00	Full Time QC Specialist Required by Specifications
02 Existing Conditions	\$ 1,771,133.00	\$ 504,652.00	\$ 374,537.00	\$ (130,115.00)	Moved Existing RAS/WAS to Div. 40
03 Concrete	\$ 6,685,205.00	\$ 7,088,878.00	\$ 8,394,514.00	\$ 1,305,636.00	Cost of rebar, Davis Bacon wages increased, See VE for Additional Increases, updated thicknesses & spec.
04 Masonry	\$ 567,873.00	\$ 358,022.00	\$ 396,198.00	\$ 38,176.00	
05 Metals	\$ 896,188.00	\$ 1,023,532.00	\$ 1,569,012.00	\$ 545,480.00	Material price increases and finalized scope
06 Woods & Plastics	\$ 8,956.00	\$ 7,356.00	\$ 82,886.00	\$ 75,530.00	Now includes Casework
07 Thermal & Moisture Protection	\$ 141,532.00	\$ 116,511.00	\$ 287,645.00	\$ 171,134.00	Bentonite Waterproofing
08 Openings	\$ 307,486.00	\$ 322,044.00	\$ 396,798.00	\$ 74,754.00	Material price increases, defined scope
09 Finishes	\$ 835,340.00	\$ 733,500.00	\$ 1,098,572.00	\$ 365,072.00	Defined scope, See VE for Additional Increases, interior metal building walls are drywall
10 Specialties	\$ 44,019.00	\$ 51,651.00	\$ 70,325.00	\$ 18,674.00	
12 Furnishings	\$ 108,579.00	\$ 70,267.00	\$ 4,062.00	\$ (66,205.00)	Moved to Div. 06
13 Special Construction	\$ 1,352,657.00	\$ 1,386,346.00	\$ 1,865,289.00	\$ 478,943.00	Material price increases
21 Fire Suppression	\$ 50,000.00	\$ 60,000.00		\$ (60,000.00)	Deleted
22 Plumbing	\$ 410,000.00	\$ 325,000.00	\$ 733,600.00	\$ 408,600.00	Defined scope, chemical area drains added, trench drains added, material price increases
23 HVAC	\$ 1,352,021.00	\$ 1,410,335.00	\$ 1,745,245.00	\$ 334,910.00	Material price increases, specifications issued on air handling units
26 Electrical	\$ 5,855,494.00	\$ 6,607,234.00	\$ 7,752,920.00	\$ 1,145,686.00	Hach Claros System Added, Extra instrumentation at aeration basins, material price increases, refeed IPS
31 Earthwork	\$ 2,440,775.00	\$ 2,343,968.00	\$ 2,688,790.00	\$ 344,822.00	Over-excavations defined, fuel price increases,
32 Exterior Improvements	\$ -	\$ -	\$ 49,064.00	\$ 49,064.00	
33 Utilities	\$ 4,819,411.00	\$ 5,264,298.00	\$ 126,739.00	\$ (5,137,559.00)	Now included in Div. 40
35 Waterway and Marine Construction	\$ 285,323.00	\$ 221,573.00	\$ 253,954.00	\$ 32,381.00	Material price increases
40 Process Interconnections	\$ -	\$ -	\$ 6,336,357.00	\$ 6,336,357.00	Was included in Div. 33 at 30% and 60%, Material price increases, supply chain increases,
41 Material Processing and Handling	\$ 98,635.00	\$ 126,970.00	\$ 321,526.00	\$ 194,556.00	Was included in Div. 14 at 30% and 60%, Material price increaes, addition of Davit Cranes
44 Pollution and Waste Control Equip.	\$ 4,382,026.00	\$ 4,368,659.00	\$ 5,332,131.00	\$ 963,472.00	Ozzy Cup price increased by \$220,00, Material price increases, See VE for Additonal Increases



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**TOWN OF WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 IMPROVEMENTS AND EXPANSION**

Quotes

January 27, 2022 - 90% Design Level

Provided in Separate File

DRAFT

Not for Signing

Project name	Wellington WRF Ph 3 90%
Labor rate table	Labor - Raw (MCI)
Equipment rate table	Equipment - MCI
Report format	Sorted by 'Spec #/Area/System/Assembly' 'Detail' summary

DRAFT

Not for Signing

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
000000	General Conditions														
001	General														
GEN	General														
01	-100 General Conditions (mci)														
	Project Manager	1006.100	117.00 wk	-	-	-	-	-	-	50.00 /ea	5,850	2,700.00 /wk	315,900	321,750	321,867
	Project Engineer	1006.100	162.00 wk	-	-	-	-	-	-	50.00 /ea	8,100	2,207.36 /wk	357,592	365,692	365,854
	General Superintendent	1022.100	130.00 wk	2,000.00 /wk	260,000	-	-	-	-	/ea		-	-	260,000	364,000
	Assistant Superintendent	1022.100	65.00 wk	1,680.00 /wk	109,200	-	-	-	-	/ea		-	-	109,200	152,880
	Field Engineer	1630.100	117.00 wk	1,680.00 /wk	196,560	-	-	-	-	-	-	-	-	196,560	275,184
	Rodman	1630.100	40.00 wk	1,120.00 /wk	44,800	-	-	-	-	/ea		-	-	44,800	62,720
	Project Coordinator	1014.100	20.00 wk	-	-	-	-	-	-	-	-	1,350.00 /wk	27,000	27,000	27,000
	Senior Project Manager	1006.100	56.00 wk	-	-	-	-	-	-	50.00 /ea	2,800	2,916.00 /wk	163,296	166,096	166,152
	Yard Man	1000.100	65.00 wk	1,200.00 /wk	78,000	-	-	-	-	-	-	-	-	78,000	109,200
	Pickup	1900.210	100.00 mnth	-	-	-	-	-	-	836.00 /mnth	83,600	514.00 /mnth	51,400	135,000	136,672
	Project Signs 4x8	1614.100	1.00 ea	31.00 /mh	248	1,500.00 /ea	1,500	-	-	-	-	-	-	1,748	1,847
	Safety	1116.100	1.00 ls	31.00 /mh		25,000.00 /ls	25,000	-	-	-	-	-	-	25,000	25,000
	Safety Plank	1116.200	500.00 lf	-	-	3.00 /lf	1,500	-	-	-	-	-	-	1,500	1,500
	Safety Rail	1116.200	2,000.00 lf	31.00 /mh		1.00 /lf	2,000	-	-	-	-	-	-	2,000	2,000
	Temporary Fences	1116.200	1.00 ls	-	-	-	-	8,500.00 /ls	8,500	-	-	-	-	8,500	8,500
	Site Security/Alarm System	1644.100	24.00 mnth	31.00 /mh	3,720	450.00 /m nt h	10,800	-	-	-	-	-	-	14,520	16,008
	Temporary Power Hookup	1162.100	1.00 ls	31.00 /mh		/ls		5,000.00 /ls	5,000	-	-	-	-	5,000	5,000
	Temporary Toilets	1162.100	144.00 mnth	-	-	210.00 /m nt h	30,240	-	-	-	-	-	-	30,240	30,240
	Cell Phone	1162.100	96.00 mnth	-	-	-	-	-	-	125.00 /mnth	12,000	-	-	12,000	12,240
	Radios	1162.100	24.00 mnth	-	-	200.00 /m nt h	4,800	-	-	-	-	-	-	4,800	4,800
	Project Management Software	1672.200	27.00 mnth	-	-	-	-	-	-	-	-	1,200.00 /mnth	32,400	32,400	32,400
	Drinking Water	1162.100	1.00 ls	-	-	4,800.00 /ls	4,800	-	-	-	-	-	-	4,800	4,800
	Permit - Building - not included	1222.100	1.00 ls	-	-	-	-	-	-	-	-	/ls			
	Documents - Contract Documents	1060.100	1.00 ls	-	-	2,500.00 /ls	2,500	-	-	-	-	-	-	2,500	2,500
	Documents - Freight and Postage	1060.100	1.00 ls	-	-	5,000.00 /ls	5,000	-	-	-	-	-	-	5,000	5,000
	Photos - Project by GC	1104.100	24.00 mnth	31.00 /mh	5,952	50.00 /m nt h	1,200	-	-	-	-	-	-	7,152	9,533
	Survey Equipment, Project	1630.100	24.00 mnth	-	-	500.00 /m nt h	12,000	-	-	1,200.00 /mnth	28,800	-	-	40,800	41,376
	40' Storage Trailer	1900.142	54.00 mnth	-	-	-	-	-	-	150.00 /mnth	8,100	50.00 /mnth	2,700	10,800	10,962
	Temp Office and Storage Construction	1900.142	1.00 ls	31.00 /mh		65,000.00 /ls	65,000	-	-	-	-	-	-	65,000	65,000
	Staging Area Rock	2305.250	100.00 cy	31.00 /mh	620	34.00 /to n	5,440	-	-	-	-	-	-	6,060	6,308
	(3rd Party) 2-Ton Truck, GVW 25,950	1900.210	48.00 hr	-	-	-	-	85.00 /hr	4,080	-	-	-	-	4,080	4,080
	(MCI) Semi Tractor	1900.210	48.00 hr	6,933.20 /mnth	1,920	-	-	-	-	5,973.00 /mnth	1,654	6,160.00 /mnth	1,706	5,280	6,081
	Mob & Demob Labor	1900.210	240.00 hr	31.00 /mh	7,440	-	-	-	-	-	-	-	-	7,440	10,416
	Final Cleaning	1714.100	240.00 hr	31.00 /mh	7,440	14.59 /hr	3,502	-	-	-	-	-	-	10,942	13,918
	Dumpster Rental/Pick up	1714.100	104.00 wk	-	-	500.00 /w k	52,000	-	-	-	-	-	-	52,000	52,000
	Scaffolding	1900.300	8.00 mnth	31.00 /mh		800.00 /m nt h	6,400	-	-	-	-	-	-	6,400	6,400
	Drug Testing	1116.100	1.00 ls	31.00 /mh		-	-	-	-	-	-	3,500.00 /ls	3,500	3,500	3,500
	Advertising	1642.100	1.00 ls	-	-	-	-	-	-	-	-	2,500.00 /ls	2,500	2,500	2,500
	Safety Officer	1116.100	15.00 wk	0.00 /wk	0	-	-	-	-	-	-	2,160.00 /wk	32,400	32,400	32,400
	Office clean	2220.205	104.00 wk	1,240.00 /wk	128,960	-	-	-	-	-	-	-	-	128,960	180,544
	Internet Service	1672.200	27.00 mnth	-	-	-	-	-	-	-	-	275.00 /mnth	7,425	7,425	7,425
	Permit - Stormwater	1222.100	1.00 ls	-	-	-	-	-	-	-	-	2,500.00 /ls	2,500	2,500	2,500
	Permit - Dewatering	1222.100	1.00 ls	-	-	-	-	-	-	-	-	3,000.00 /ls	3,000	3,000	3,000
	Inspector's Trailer	1672.100	27.00 mnth	-	-	850.00 /m nt h	22,950	-	-	-	-	-	-	22,950	22,950
	Survey & Layouts building dept layback	1630.100	1.00 ls	31.00 /mh		0.00 /ls	0	18,000.00 /ls	18,000	-	-	-	-	18,000	18,000
	Admin Blower Test	1166.100	1.00 ea	31.00 /mh		/ea		4,500.00 /ea	4,500	/ea		-	-	4,500	4,500
	Quality Control Specialist	1630.100	104.00 wk	1,680.00 /wk	174,720	-	-	-	-	-	-	-	-	174,720	244,608
	General Conditions (mci)				1,019,580		256,632	/wk	40,080		150,904		1,003,319	2,470,515	2,881,365
	GEN General				1,019,580		256,632		40,080		150,904		1,003,319	2,470,515	2,881,365
	001 General				1,019,580		256,632	/LS	40,080		150,904		1,003,319	2,470,515	2,881,365
	000000 General Conditions				1,019,580		256,632		40,080		150,904		1,003,319	2,470,515	2,881,365
020000	Existing Conditions														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
001	General														
	GEN General														
	01 -100 General Existing Item Budget Allowances (not shown on drawings)														
	Existing Belt Press Building Conversion include 8 k elect	2010.110	1.00 ls	-	-	-	-	100,000.00 /ls	100,000	-	-	-	-	100,000	100,000
	Electrical Sub and intergrator RAS/WAS Pumps Station	2010.110	1.00 ls	-	-	-	-	20,000.00 /ls	20,000	-	-	-	-	20,000	20,000
	Headworks Electrical Demo	2010.110	1.00 ls	-	-	-	-	5,000.00 /ls	5,000	-	-	-	-	5,000	5,000
	Headworks Remove Equipment	2010.110	1.00 ls	-	-	-	-	15,000.00 /ls	15,000	-	-	-	-	15,000	15,000
	Miscellaneous Furnishings Budget and appliances	12500.100	1.00 ls	31.00 /mh		/ls		30,000.00 /ls	30,000	-	-	-	-	30,000	30,000
	Dionized Water Equipment Budget lab noco polish system include electrical	12500.100	1.00 ls	31.00 /mh		/ls		9,000.00 /ls	9,000	-	-	-	-	9,000	9,000
	General Existing Item Budget Allowances (not shown on drawings)							/wk	179,000					179,000	179,000
	GEN General								179,000					179,000	179,000
	001 General							/LS	179,000					179,000	179,000
	020000 Existing Conditions								179,000					179,000	179,000
024100	Demolition														
	051 Site Civil														
	Demo Demo														
	020- Demo Sidewalks Around Digesters & Clarifiers for Yard Piping														
	Demo Concrete Sidewalks	2220.730	1,850.00 sf	31.00 /mh	2,294	-	-	-	-	/ch		-	-	2,294	3,212
	Dump Fees	2220.980	80.00 tn	-	-	58.00 /tn	4,640	-	-	-	-	-	-	4,640	4,640
	Trucking Demo Materials	2220.980	12.50 hr	31.00 /mh				-	-	115.00 /hr	1,438	-	-	1,438	1,466
	Remove and Relocate Equipment - Exterior Lighting??	2220.140	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,250	3,500.00 /mnth	1,750	6,000	6,085
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,750	3,000.00 /mnth	1,500	4,250	4,305
	Electrical Sub replace light poles	16000.001	1.00 ls	-	-	-	-	10,000.00 /ls	10,000	-	-	-	-	10,000	10,000
	Demo Sidewalks Around Digesters & Clarifiers for Yard Piping		1.00 ls		2,790		4,640	10,000.00 /ls	10,000		8,438		3,250	29,118	30,402
	020- Misc Site Demolition - 051-C-0001														
	Demo Chain Link Fencing	2220.735	40.00 lf	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Demo Metal Bollards	2220.735	3.00 ea	31.00 /mh	93	-	-	-	-	/ch		-	-	93	130
	Cut, Plug and Abandon Pipe (2 Plcs) 14"	2230.100	1.00 ls	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Cut, Plug and Abandon Pipe 36" (Placing MH)	2230.100	1.00 ls	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	3500 psi Concrete	3310.100	3.00 cy	-	-	165.00 /cy	530	-	-	-	-	-	-	530	530
	PVC C-900 Caps 14	2336.330	2.00 ea	31.00 /mh	62	740.00 /ea	1,480	-	-	-	-	-	-	1,542	1,567
	John Deere 624 Loader (172 HP) (M)	1900.132	0.08 mnth	-	-	-	-	-	-	5,500.00 /mnth	440	3,000.00 /mnth	240	680	689
	Misc Site Demolition - 051-C-0001				1,891		2,010	/ls			440		240	4,581	5,346
	020- Demo Asphalt Drying Beds														
	Demo Asphalt	2220.730	48,000.00 sf	31.00 /mh	2,232	-	-	-	-	/ch		-	-	2,232	3,125
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,375	3,000.00 /mnth	750	2,125	2,153
	Hitachi 225 Excavator w/ Breaker (147 HP) (L)	1900.136	0.25 mnth	-	-	-	-	-	-	10,000.00 /mnth	2,500	2,200.00 /mnth	550	3,050	3,100
	(3rd Party) Semi Tractor (2 hour round trip)	1900.210	98.00 hr	-	-	-	-	125.00 /hr	12,250	-	-	-	-	12,250	12,250
	Demo Asphalt Drying Beds		1.00 ls		2,232		12,250.00 /ls	12,250			3,875		1,300	19,657	20,627
	0203- Demo Concrete 051-C-0001														
	Demo Concrete	2220.083	16.00 cy	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	(3rd Party) Semi Tractor (2 hour round trip)	1900.210	4.00 hr	-	-	-	-	125.00 /hr	500	-	-	-	-	500	500
	Dump Fees	2220.980	16.00 tn	-	-	40.00 /tn	640	-	-	-	-	-	-	640	640
	Hitachi 225 Excavator w/ Breaker (147 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	10,000.00 /mnth	1,700	2,200.00 /mnth	374	2,074	2,108
	Demo Concrete 051-C-0001		16.00 CY		248		640	31.25 /CY	500		1,700		374	3,462	3,595
	0206- Demo Buried Pipe From Drying Bed to Pond														
	Demo Buried Pipe (Type Unknown) (Enter Dia)	2230.100	90.00 lf	31.00 /mh	279	-	-	-	-	-	-	-	-	279	391
	Trench Excavtion 0- 4'	2333.010	90.00 lf	31.00 /mh	223	-	-	-	-	-	-	-	-	223	312
	Trench Backfill 0- 4'	2333.020	90.00 lf	31.00 /mh	279	-	-	-	-	-	-	-	-	279	391
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	349	3,500.00 /mnth	144	492	499
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 mnth	-	-	-	-	-	-	5,500.00 /mnth	226	3,000.00 /mnth	123	349	353
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 mnth	-	-	-	-	-	-	4,500.00 /mnth	180	1,200.00 /mnth	48	228	232
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 mnth	-	-	-	-	-	-	200.00 /mnth	8	100.00 /mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 mnth	-	-	-	-	-	-	2,000.00 /mnth	80	300.00 /mnth	12	92	94
	Dump Fees & Trash Haul	1162.100	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Demo Buried Pipe From Drying Bed to Pond		90.00 lf		781		500	/lf			842		331	2,454	2,783
	0206- Demo 4" and 8" WAS														
	Demo Ductile Iron Pipe (Enter Dia)	2230.100	180.00 lf	31.00 /mh	502	-	-	-	-	-	-	-	-	502	703
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	349	3,500.00 /mnth	144	492	499
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 mnth	-	-	-	-	-	-	5,500.00 /mnth	226	3,000.00 /mnth	123	349	353
	Dump Fees & Trash Haul	1162.100	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Demo 4" and 8" WAS		90.00 lf		502		500	/lf			574		267	1,843	2,055
	0206- Demo 4" DIP and Cap - 051-C-0001														
	Trench Excavtion 0- 4'	2333.010	90.00 lf	31.00 /mh	446	-	-	-	-	-	-	-	-	446	625
	Trench Backfill 0- 4'	2333.020	90.00 lf	31.00 /mh	837	-	-	-	-	-	-	-	-	837	1,172
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.07 mnth	-	-	-	-	-	-	8,500.00 /mnth	595	3,500.00 /mnth	245	840	852
	John Deere 624 Loader (172 HP) (M)	1900.132	0.07 mnth	-	-	-	-	-	-	5,500.00 /mnth	385	3,000.00 /mnth	210	595	603
	Water Truck, 4,000 Gallon (L)	1900.210	0.07 mnth	-	-	-	-	-	-	4,500.00 /mnth	315	1,200.00 /mnth	84	399	405

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0206- Demo 4" DIP and Cap - 051-C-0001														
	Mikasa Jumping Jack Compactor (L)	1900.138	0.07 mnth	-	-	-	-	-	-	200.00 /mnth	14	100.00 /mnth	7	21	21
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.07 mnth	-	-	-	-	-	-	2,000.00 /mnth	140	300.00 /mnth	21	161	164
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	DI MJ Compact Cap 4	2511.310	1.00 ea	31.00 /mh	9	150.00 /ea	150	-	-	-	-	-	-	159	163
	Demo 4" DIP and Cap - 051-C-0001		90.00 lf		1,355		150	/lf			1,449		567	3,521	4,092
	Demo Demo				9,799		8,440		22,750		17,318		6,328	64,634	68,900
	051 Site Civil				9,799		8,440	/LS	22,750		17,318		6,328	64,634	68,900
	650 Existing Digester 1 to 4														
	Demo Demo														
	0203- 8" SQ Openings - 650-S-1011 & 1020														
	Demo Concrete	2220.083	1.00 cy	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Torch Set and Ocy/Acet.	1900.300	0.50 mnth	-	-	1,000.00 /mnt h	500	-	-	1,000.00 /mnth	500	-	-	1,000	1,010
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,750	3,000.00 /mnth	1,500	4,250	4,305
	X ray testing digester 1-2	1166.100	1.00 ls	-	-	-	-	-	-	-	-	1,500.00 /ls	1,500	1,500	1,500
	Patch and coat rebar	3350.130	5.00 ea	31.00 /mh	2	50.00 /ea	250	-	-	-	-	-	-	252	253
	8" SQ Openings - 650-S-1011 & 1020		1.00 CY		994		750	/CY			3,250		3,000	7,994	8,457
	0203- Saw Cutting/Core Drilling Sub														
	Saw Cut & Core Drill Sub	2220.083	1.00 ls	31.00 /mh	6	-	-	15,650.00 /ls	15,650	/ls		-	-	15,656	15,659
	Saw Cutting/Core Drilling Sub				6			/CY	15,650					15,656	15,659
	Demo Demo				1,001		750		15,650		3,250		3,000	23,651	24,116
	Digester 1&2														
	02-2b Remove Transfer Sludge Piping & Valves														
	Demo DI Pipe 4"	2220.605	50.00 lf	31.00 /mh	775	-	-	-	-	-	-	-	-	775	1,085
	Demo Pipe Hangers 4"	2220.610	15.00 ea	31.00 /mh	233	-	-	-	-	-	-	-	-	233	326
	Demo Pipe Valves 4"	2220.840	3.00 ea	31.00 /mh	28	-	-	-	-	-	-	-	-	28	39
	Dumpster Pickups	2220.980	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Grout/Fix Existing Concrete Anchors	3150.200	1.00 ls	31.00 /mh	31	100.00 /ls	100	-	-	-	-	-	-	131	143
	Core Drill ~8" for new Transfer Sludge Pipe	2220.085	2.00 ea	31.00 /mh	62	-	-	0.00 /ea	0	-	-	-	-	62	87
	Remove Transfer Sludge Piping & Valves		30.00 lf		1,128		600	/lf						1,728	2,180
	02-2b Remove WAS Piping to Be Lowered														
	Demo DI Pipe 4"	2220.605	6.00 lf	31.00 /mh	93	-	-	-	-	-	-	-	-	93	130
	Demo Pipe Hangers 4"	2220.610	2.00 ea	31.00 /mh	31	-	-	-	-	-	-	-	-	31	43
	Grout/Fix Existing Concrete anchors	3150.200	1.00 ls	31.00 /mh	124	100.00 /ls	100	-	-	-	-	-	-	224	274
	Core Drill ~8" for New WAS Piping	2220.085	2.00 ea	31.00 /mh	248	-	-	0.00 /ea	0	-	-	-	-	248	347
	Remove WAS Piping to Be Lowered		30.00 lf		496		100	/lf						596	794
	020- Demo Course Bubble Diffusers														
	Demo Equip. - Coarse Bubble Diffusers 75LF	2220.140	42.00 ea	31.00 /mh	5,208	-	-	-	-	-	-	-	-	5,208	7,291
	Grout/Fix Existing Concrete	3150.200	1.00 ls	31.00 /mh	31	800.00 /ls	800	-	-	-	-	-	-	831	843
	Demo Course Bubble Diffusers				5,239		800	/ls						6,039	8,135
	020- Demo Decant Mechanism & Piping														
	Demo Equipment - Decant Mechanism	2220.140	2.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Dumpster Pickups	2220.980	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Grout/Fix Existing Concrete -Wall Opening	3150.200	1.00 ls	31.00 /mh	124	1,000.00 /ls	1,000	-	-	-	-	-	-	1,124	1,174
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	248	75.00 /ea	150	-	-	-	-	-	-	398	497
	NBG Kit 125# SS 4in	15125.012	2.00 ea	31.00 /mh	19	200.00 /ea	400	-	-	-	-	-	-	419	426
	Demo Decant Mechanism & Piping				887		2,050	/ls						2,937	3,291
	020- Demo Exisitng Platform, Railing and Stairs														
	Demo Metal Stairs/Platforms	2220.490	1.00 ea	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Grout Existing Connection Point/Holes	3150.200	1.00 ls	31.00 /mh	248	50.00 /ls	50	-	-	-	-	-	-	298	397
	Dumpster Pickups	2220.980	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Grove RT760/RT700, 60 ton (240 HP) (L) All demo at digester 5/6	1900.100	0.50 mnth	7,296.00 /mnth	3,648	350.00 /mnt h	175	-	-	9,500.00 /mnth	4,750	1,500.00 /mnth	750	9,323	10,877
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 mnth	-	-	-	-	-	-	1,200.00 /mnth	1,200	100.00 /mnth	100	1,300	1,324
	Demo Exisitng Platform, Railing and Stairs				4,144		725	/ls			5,950		850	11,669	13,446
	0203- 8" Core Drill - 650-D-1010														
	Core Drill 8"	2220.085	1.00 ea	31.00 /mh	31	-	-	0.00 /ea	0	-	-	-	-	31	43
	8" Core Drill - 650-D-1010				31			/CY						31	43
	Digester 1&2				11,925		4,275				5,950		850	23,000	27,889
	Digester 3&4														
	02-2b Remove Transfer Sludge Piping and Valves														
	Demo DI Pipe 4"	2220.605	70.00 lf	31.00 /mh	217	-	-	-	-	-	-	-	-	217	304
	Demo Pipe Hangers 4"	2220.610	25.00 ea	31.00 /mh	388	-	-	-	-	-	-	-	-	388	543
	Dumpster Pickups	2220.980	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Grout/Fix Existing Concrete	3150.200	1.00 ls	31.00 /mh	124	250.00 /ls	250	-	-	-	-	-	-	374	424
	Core Drill ~8" for New Transfer Sludge Pipe	2220.085	2.00 ea	31.00 /mh	62	-	-	0.00 /ea	0	-	-	-	-	62	87

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Remove Transfer Sludge Piping and Valves		50.00 lf		791		750	/lf						1,541	1,857
02-2b	Remove WAS Piping to Be Lowered														
	Demo DI Pipe 4"	2220.605	6.00 lf	31.00 /mh	37	-	-	-	-	-	-	-	-	37	52
	Demo Pipe Hangers 4"	2220.610	2.00 ea	31.00 /mh	31	-	-	-	-	-	-	-	-	31	43
	Grout/Fix Existing Concrete	3150.200	1.00 ls	31.00 /mh	124	250.00 /ls	250	-	-	-	-	-	-	374	424
	Core Drill ~8" for New WAS Piping	2220.085	2.00 ea	31.00 /mh	62	-	-	0.00 /ea	0	-	-	-	-	62	87
	Remove WAS Piping to Be Lowered		30.00 lf		254		250	/lf						504	606
020-	Demo Course Bubble Diffusers														
	Demo Equip. - Coarse Bubble Diffusers 540LF	2220.140	336.00 ea	31.00 /mh	4,166	-	-	-	-	-	-	-	-	4,166	5,833
	Grout/Fix Exising Concrete	3150.200	1.00 ls	31.00 /mh		1,500.00 /ls	1,500	-	-	-	-	-	-	2,740	3,236
	Demo Course Bubble Diffusers				5,406		1,500	/ls						6,906	9,069
020-	Demo Exisitng Platform, Railing and Stairs														
	Demo Metal Stairs/Platforms	2220.490	2.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Grout Existing Connection Point/Holes	3150.200	1.00 ls	31.00 /mh	248	250.00 /ls	250	-	-	-	-	-	-	498	597
	Dumpster Pickups	2220.980	4.00 ea	-	-	500.00 /ea	2,000	-	-	-	-	-	-	2,000	2,000
	Demo Exisitng Platform, Railing and Stairs				744		2,250	/ls						2,994	3,292
0203-	2'x3' Opening - 650-S3002														
	Demo Concrete	2220.083	2.36 cy	31.00 /mh	1,173	-	-	-	-	-	-	-	-	1,173	1,642
	Saw Cut	2220.083	384.00 lf	31.00 /mh	2,381	-	-	-	-	/lf	-	-	-	2,381	3,333
	60 lb Jack Hammer	1900.138	1.00 mnth	-	-	-	-	-	-	400.00 /mnth	400	100.00 /mnth	100	500	508
	Torch Set and Ocy/Acet.	1900.300	0.50 mnth	-	-	1,000.00 /m nt h	500	-	-	1,000.00 /mnth	500	-	-	1,000	1,010
	Grove RT760/RT700, 60 ton (240 HP) (L) alll digester 1-4	1900.100	0.50 mnth	7,296.00 /mnth	3,648	350.00 /m nt h	175	-	-	9,500.00 /mnth	4,750	1,500.00 /mnth	750	9,323	10,877
	Skyjack/Genie 19' Scissor Lift (Requires Power Source)	1900.300	1.00 mnth	-	-	-	-	-	-	800.00 /mnth	800	100.00 /mnth	100	900	916
	Grind/Patch Concrete at openings	3350.130	1.00 ls	31.00 /mh	124	750.00 /ls	750	-	-	-	-	-	-	874	924
	2'x3' Opening - 650-S3002		2.36 CY		7,325		1,425	/CY			6,450		950	16,150	19,209
0203-	10" Core Drill - 640-D-1010														
	Core Drill Concrete 10"	2220.085	1.00 ea	31.00 /mh	124	-	-	0.00 /ea	0	-	-	-	-	124	174
	X ray testing digester 4	1166.100	1.00 ls	-	-	-	-	-	-	-	-	1,500.00 /ls	1,500	1,500	1,500
	10" Core Drill - 640-D-1010		0.04 CY		124			/CY					1,500	1,624	1,674
0206-	Demo 4" Decant Line and Valve														
	Demo Ductile Iron Pipe (4")	2230.100	14.00 lf	31.00 /mh	109	-	-	-	-	-	-	-	-	109	152
	Trench Excavtion 10-12'	2333.010	14.00 lf	31.00 /mh	74	-	-	-	-	-	-	-	-	74	103
	Trench Backfill 10-12'	2333.020	14.00 lf	31.00 /mh	95	-	-	-	-	-	-	-	-	95	134
	Dumpster Pickups	2220.980	1.00 ea	-	-	500.00 /ea	500	-	-	-	-	-	-	500	500
	Non Shrink Grout - Patch Opening in Slab	3150.700	1.00 cf	31.00 /mh	31	60.00 /cf	60	-	-	-	-	-	-	91	103
	Demo 4" Decant Line and Valve		14.00 lf		309		560	/lf						869	992
	Digester 3&4				14,953		6,735				6,450		2,450	30,588	36,698
	650 Existing Digester 1 to 4				27,879		11,760	/LS	15,650		15,650		6,300	77,239	88,703
750 Lab and Control Building															
Demo Demo															
020-	Misc. Demo for new Lab Casework														
	Demo Shelving	2220.730	2.00 ea	31.00 /mh	248	-	-	-	-	/ea	-	-	-	248	347
	Demo Water Purification System	2220.730	1.00 ea	31.00 /mh	124	-	-	-	-	/ea	-	-	-	124	174
	Demo Drywall where Backing is Needed	2220.730	24.00 sf	31.00 /mh	149	-	-	-	-	/ch	-	-	-	149	208
	Misc. Demo for new Lab Casework				521			/ls						521	729
	Demo Demo				521									521	729
	750 Lab and Control Building				521			/LS						521	729
850 Existing RAS/WAS															
Exis RAS/WAS															
02-2b	Demo RAS/WAS Interior Pipe and Valves														
	Demo DI Pipe 8"	2220.605	576.00 lf	31.00 /mh	3,571	-	-	-	-	-	-	-	-	3,571	5,000
	Demo Pipe Hangers 8"	2220.610	100.00 ea	31.00 /mh	1,550	-	-	-	-	-	-	-	-	1,550	2,170
	Demo Pipe Valves 8"	2220.840	20.00 ea	31.00 /mh	1,240	-	-	-	-	-	-	-	-	1,240	1,736
	Hoisting Costs	1485.100	1.00 mnth	31.00 /mh	554	1,500.00 /m nt h	1,500	-	-	-	-	-	-	2,054	2,275
	Demo Concrete pads	2220.083	11.00 ea	31.00 /mh	8,184	-	-	-	-	-	-	-	-	8,184	11,458
	60 lb Jack Hammer	1900.138	1.00 mnth	-	-	-	-	-	-	800.00 /mnth	800	100.00 /mnth	100	900	916
	Air Compressor 185 cfm (66 HP) (L)	1900.010	1.00 mnth	-	-	-	-	-	-	750.00 /mnth	750	705.00 /mnth	705	1,455	1,470
	Dumpster Rental/Pick up	1714.100	4.00 ea	-	-	500.00 /ea	2,000	-	-	-	-	-	-	2,000	2,000
	Grind/Patch Architectural Wall	3350.130	1.00 ls	31.00 /mh	744	1,500.00 /ls	1,500	-	-	-	-	-	-	2,244	2,542
	Demo RAS/WAS Interior Pipe and Valves		576.00 lf		15,843		5,000	/lf			1,550		805	23,198	29,566
020-	Demo WAS/RAS & SCUM Pumps														
	Demo Equipment - RAS Pump	2220.140	5.00 ea	31.00 /mh	2,480	-	-	-	-	-	-	-	-	2,480	3,472
	Demo Equipment - WAS Pump	2220.140	5.00 ea	31.00 /mh	2,480	-	-	-	-	-	-	-	-	2,480	3,472

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	020- Demo WAS/RAS & SCUM Pumps														
	Demo Equipment - SCUM Pump	2220.140	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Demo WAS/RAS & SCUM Pumps				5,456			/ls						5,456	7,638
	Exis. RAS/WAS				21,299		5,000				1,550		805	28,654	37,204
	850 Existing RAS/WAS				21,299		5,000				1,550		805	28,654	37,204
	024100 Demolition				59,497		25,200		38,400		34,518		13,433	171,048	195,537
	033000 Cast-In-Place Concrete														
	001 General														
	Concrete Concrete														
	014- Winter Conditions														
	Winter Conditions	1572.100	10.00 mnth	31.00 /mh	42,780	1,000.00 /m nt h	10,000	-	-	-	-	-	-	52,780	69,892
	2012 Allmand Self Cont. 1M BTU Heater(In @ 4.0 gal/hr w/ 2 burners+1 gal/hr Gen running *3 24/7) (L)	1900.400	10.00 mnth	-	-	0.00 /m nt h	0	-	-	2,250.00 /mnth	22,500	2,000.00 /mnth	20,000	42,500	42,950
	Winter Heat Propane	1572.100	10.00 mnth	-	-	1,500.00 /m nt h	15,000	-	-	-	-	-	-	15,000	15,000
	Snow Shovel Ground Level	1572.300	96.00 mnhr	31.00 /mh	2,976	-	-	-	-	-	-	-	-	2,976	4,166
	Snow Plowing	1572.300	10.00 mnth	31.00 /mh	2,480	0.00 /m nt h	0	-	-	-	-	-	-	2,480	3,472
	Ground Heater E2200 (In @ 1.1 gal/hr *3 24/7) (L)	1900.400	4.00 mnth	-	-	-	-	-	-	6,000.00 /mnth	24,000	3,800.00 /mnth	15,200	39,200	39,680
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	6,000	2,000.00 /mnth	4,000	10,000	10,120
	Winter Conditions		10.00 mo		48,236		25,000	/mo			52,500		39,200	164,936	185,280
	019-100 Water Test Basin														
	Water Test Basins	3995.200	8.00 ea	31.00 /mh	5,952	/ea		-	-	-	-	-	-	5,952	8,333
	Test Water	3995.200	8.00 ea	31.00 /mh		/ea		-	-	/ea		-	-		
	Pumps	3995.200	8.00 ea	31.00 /mh		1,000.00 /ea	8,000	-	-	/ea		-	-	8,000	8,000
	Temporary Bulkheads	3995.200	23.00 ea	31.00 /mh	5,704	250.00 /ea	5,750	-	-	-	-	-	-	11,454	13,736
	Hose and Acc	3995.200	8.00 ea	31.00 /mh		500.00 /ea	4,000	-	-	/ea		-	-	4,000	4,000
	Urethane Injection System	3995.200	8.00 ea	31.00 /mh	39,680	2,000.00 /ea	16,000	-	-	1,000.00 /ea	8,000	-	-	63,680	79,712
	Epoxy Injection System	3995.200	8.00 ea	31.00 /mh	39,680	2,500.00 /ea	20,000	-	-	1,000.00 /ea	8,000	-	-	67,680	83,712
	Water Test Basin		8.00 ea		91,016		53,750	/ea			16,000			160,766	197,492
	0380- Concrete Equipment														
	Razorback Screed	3995.100	6.00 ea	-	-	-	-	-	-	500.00 /ea	3,000	-	-	3,000	3,060
	Troweling Machine	3995.100	12.00 mnth	-	-	-	-	-	-	300.00 /mnth	3,600	-	-	3,600	3,672
	Concrete Crane Buckets	3995.100	27.00 mnth	-	-	-	-	-	-	150.00 /mnth	4,050	-	-	4,050	4,131
	Generators High cylce	3995.100	72.00 mnth	-	-	-	-	-	-	300.00 /mnth	21,600	-	-	21,600	22,032
	Concrete Vibrators	3995.100	72.00 mnth	-	-	-	-	-	-	300.00 /mnth	21,600	-	-	21,600	22,032
	Formwork Freight	3150.200	52.00 ld	31.00 /mh	0	-	-	-	-	-	-	650.00 /load	33,800	33,800	33,800
	Grove RT760/RT700, 60 ton, wo/operator (240 HP) (L)	1900.100	8.00 mnth	-	-	350.00 /m nt h	2,800	-	-	10,400.00 /mnth	83,200	1,500.00 /mnth	12,000	98,000	99,664
	Crane Mob by Sub	1900.100	1.00 ea	31.00 /mh		-	-	2,000.00 /ea	2,000	-	-	-	-	2,000	2,000
	Manitowoc 10000 - 100 Ton (332 HP) (L)	1900.100	19.00 mnth	7,296.00 /mnth	138,624	350.00 /m nt h	6,650	-	-	12,500.00 /mnth	237,500	2,200.00 /mnth	41,800	424,574	484,774
	Crane Mob by Sub	1900.100	1.00 ea	31.00 /mh		-	-	10,000.00 /ea	10,000	-	-	-	-	10,000	10,000
	Concrete Formwork Design Fees	1500.100	1.00 ls	-	-	-	-	12,500.00 /ls	12,500	-	-	-	-	12,500	12,500
	Air Compressor 185 cfm (66 HP) (L)	1900.010	27.00 mnth	-	-	-	-	-	-	750.00 /mnth	20,250	705.00 /mnth	19,035	39,285	39,690
	Welding Machine 300 amp (33 HP) (L)	1900.012	3.00 mnth	-	-	/m nt h		-	-	350.00 /mnth	1,050	550.00 /mnth	1,650	2,700	2,721
	Concrete Foreman	1000.100	24.00 wk	1,520.00 /wk	36,480	-	-	-	-	-	-	-	-	36,480	51,072
	Pickup	1900.210	12.00 mnth	-	-	-	-	-	-	836.00 /mnth	10,032	514.00 /mnth	6,168	16,200	16,401
	Stair Tower and Stair Acess	1900.300	16.00 mo	31.00 /mh		800.00 /m o	12,800	-	-	-	-	-	-	12,800	12,800
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	12.00 mnth	-	-	-	-	-	-	3,500.00 /mnth	42,000	1,200.00 /mnth	14,400	56,400	57,240
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	22.00 mnth	-	-	-	-	-	-	1,200.00 /mnth	26,400	100.00 /mnth	2,200	28,600	29,128
	Concrete Equipment				175,104		22,250	/ls	24,500		474,282		131,053	827,189	906,716
	0385- Reinforcement														
	Rebar Supply in with install	3200.980	1.00 ls	31.00 /mh		0.00 /ls	0	-	-	-	-	-	-		
	Rebar Supply and Install	3200.980	1.00 ls	-	-	-	-	1,498,911.00 /ls	1,498,911	-	-	-	-	1,498,911	1,498,911
	Rebar Chairs	3200.980	11,800.00 ea	31.00 /mh	4	0.35 /ea	4,130	-	-	-	-	-	-	4,134	4,135
	Rebar Bricks	3200.980	6,000.00 ea	31.00 /mh	2	0.65 /ea	3,900	-	-	-	-	-	-	3,902	3,903
	Rebar Acc: wire and acc	3200.980	1.00 ls	31.00 /mh		1,500.00 /ls	1,500	-	-	-	-	-	-	1,500	1,500
	Wall Spreaders and slab sspreaders and added splices	3200.980	1.00 ls	31.00 /mh		30,000.00 /ls	30,000	-	-	-	-	-	-	30,000	30,000
	Deck and Walk Bolster	3200.980	2,600.00 lf	31.00 /mh	1	0.65 /lf	1,690	-	-	-	-	-	-	1,691	1,691

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Reinforcement				6		41,220		1,498,911					1,540,137	1,540,140
	Concrete Concrete				314,362		142,220		1,523,411		542,782		170,253	2,693,028	2,829,629
	001 General				314,362		142,220	/LS	1,523,411		542,782		170,253	2,693,028	2,829,629
051 Site Civil															
Concrete Concrete															
0302- Sidewalks Drawing 051-C-1001 all except clarifiers															
5000 psi Concrete	3310.100	60.65 cy	-	-	-	167.00 /cy	10,837	-	-	-	-	-	-	10,837	10,837
Slab Placement Count	3310.360	8.00 ea	-	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
Truck Place Slab on Grade	3310.230	60.65 cy	31.00 /mh	1,609	-	-	-	-	-	-	-	-	-	1,609	2,253
Formwork S.O.G. Edge Form < 1'	3100.120	1,162.00 sf	31.00 /mh	11,527	1.50 /sf	1,830	-	-	-	-	-	-	-	13,357	17,968
Formwork S.O.G. Const Joints < 1'	3100.120	41.00 sf	31.00 /mh	585	1.50 /sf	65	-	-	-	-	-	-	-	649	883
CJ Prep Slab	3350.170	41.00 sf	31.00 /mh	32	0.15 /sf	6	-	-	-	-	-	-	-	38	51
Finegrade Below Concrete	3150.650	3,275.00 sf	31.00 /mh	2,031	-	-	-	-	-	-	-	-	-	2,031	2,843
Finish- Hard Trowel	3350.110	3,275.00 sf	31.00 /mh	1,421	/sf	-	-	-	-	-	-	-	-	1,421	1,990
Liquid Curing Compounds	3390.170	3,275.00 sf	31.00 /mh	203	0.06 /sf	197	-	-	-	-	-	-	-	400	481
Road Base Below Concrete	2305.300	92.00 cy	31.00 /mh	1,426	22.00 /ton	4,008	-	-	-	-	-	-	-	5,434	6,004
Oil SOG Form	3100.310	622.00 sf	31.00 /mh	0	0.02 /sf	12	-	-	-	-	-	-	-	13	13
Nails and Hardware	3150.200	581.00 sf	31.00 /mh	0	0.04 /sf	23	-	-	-	-	-	-	-	23	24
Dimension Lumber	3150.200	581.00 sf	31.00 /mh	0	0.50 /sf	291	-	-	-	-	-	-	-	291	291
Saw Cut S-O-G	3350.160	1,130.00 lf	31.00 /mh	1,051	0.50 /lf	565	-	-	0.50 /lf	565	-	-	-	2,181	2,613
SOG Rebar	3210.104	6.06 tn	31.00 /mh	4,697	1,400.00 /tn	8,908	-	-	-	-	-	-	-	13,605	15,483
Expansion Joint Cork 6in wide x 3/4in thick	3150.720	400.00 lf	31.00 /mh	620	6.00 /lf	2,520	-	-	-	-	-	-	-	3,140	3,388
Caulking 10.3 oz tube 3/4d x 3/4w expansion Joint	7920.300	400.00 lf	31.00 /mh	620	15.00 /tube	2,276	-	-	-	-	-	-	-	2,896	3,144
Sidewalks Drawing 051-C-1001 all except clarifiers		60.65 cy		25,822		31,537	/cy				565			57,924	68,264
0302- Concrete Valley Pan 051-C-1001															
5000 psi Concrete	3310.100	18.09 cy	-	-	-	167.00 /cy	3,232	-	-	-	-	-	-	3,232	3,232
Truck Place Slab on Grade	3310.230	18.09 cy	31.00 /mh	390	-	-	-	-	-	-	-	-	-	390	546
Formwork S.O.G. Edge Form < 1'	3100.120	329.64 sf	31.00 /mh	3,270	1.50 /sf	519	-	-	-	-	-	-	-	3,789	5,097
Formwork S.O.G. Const Joints < 1'	3100.120	12.06 sf	31.00 /mh	172	1.50 /sf	19	-	-	-	-	-	-	-	191	260
CJ Prep Slab	3350.170	12.06 sf	31.00 /mh	9	0.15 /sf	2	-	-	-	-	-	-	-	11	15
Finegrade Below Concrete	3150.650	729.00 sf	31.00 /mh	452	-	-	-	-	-	-	-	-	-	452	633
Finish- Hard Trowel	3350.110	729.00 sf	31.00 /mh	316	/sf	-	-	-	-	-	-	-	-	316	443
Liquid Curing Compounds	3390.170	729.00 sf	31.00 /mh	45	0.06 /sf	44	-	-	-	-	-	-	-	89	107
Oil SOG Form	3100.310	341.70 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	-	7	7
Nails and Hardware	3150.200	329.64 sf	31.00 /mh	0	0.04 /sf	13	-	-	-	-	-	-	-	13	13
Dimension Lumber	3150.200	329.64 sf	31.00 /mh	0	0.50 /sf	165	-	-	-	-	-	-	-	165	165
Saw Cut S-O-G	3350.160	240.00 lf	31.00 /mh	223	0.50 /lf	120	-	-	0.50 /lf	120	-	-	-	463	555
SOG Rebar	3210.104	2.26 tn	31.00 /mh	1,752	1,400.00 /tn	3,324	-	-	-	-	-	-	-	5,076	5,777
Concrete Valley Pan 051-C-1001		18.09 cy		6,631		7,445	/cy				120			14,195	16,850
0302- Clarifier Sidewalks 051-C-1001															
5000 psi Concrete	3310.100	34.26 cy	-	-	-	167.00 /cy	6,122	-	-	-	-	-	-	6,122	6,122
Slab Placement Count	3310.360	4.00 ea	-	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
Truck Place Slab on Grade	3310.230	34.26 cy	31.00 /mh	739	-	-	-	-	-	-	-	-	-	739	1,034
Formwork S.O.G. Edge Form < 1'	3100.120	375.00 sf	31.00 /mh	3,720	1.50 /sf	591	-	-	-	-	-	-	-	4,311	5,799
Formwork S.O.G. Const Joints < 1'	3100.120	17.50 sf	31.00 /mh	250	1.50 /sf	28	-	-	-	-	-	-	-	277	377
CJ Prep Slab	3350.170	17.50 sf	31.00 /mh	14	0.15 /sf	3	-	-	-	-	-	-	-	16	22
Finegrade Below Concrete	3150.650	1,850.00 sf	31.00 /mh	1,147	-	-	-	-	-	-	-	-	-	1,147	1,606
Finish- Hard Trowel	3350.110	1,850.00 sf	31.00 /mh	803	/sf	-	-	-	-	-	-	-	-	803	1,124
Liquid Curing Compounds	3390.170	1,850.00 sf	31.00 /mh	115	0.06 /sf	111	-	-	-	-	-	-	-	226	272
Road Base Below Concrete	2305.300	51.00 cy	31.00 /mh	791	22.00 /ton	2,222	-	-	-	-	-	-	-	3,012	3,328
Oil SOG Form	3100.310	392.50 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	-	8	8
Nails and Hardware	3150.200	375.00 sf	31.00 /mh	0	0.04 /sf	15	-	-	-	-	-	-	-	15	15
Dimension Lumber	3150.200	375.00 sf	31.00 /mh	0	0.50 /sf	188	-	-	-	-	-	-	-	188	188
Saw Cut S-O-G	3350.160	740.00 lf	31.00 /mh	688	0.50 /lf	370	-	-	0.50 /lf	370	-	-	-	1,428	1,711
SOG Rebar	3210.104	3.43 tn	31.00 /mh	2,655	1,400.00 /tn	5,036	-	-	-	-	-	-	-	7,691	8,753
Expansion Joint Asphalt 6in wide x 3/4in thick	3150.720	314.00 lf	31.00 /mh	487	6.00 /lf	1,978	-	-	-	-	-	-	-	2,465	2,660
Caulking 10.3 oz tube 3/4d x 3/4w Expansion Joint	7920.300	314.00 lf	31.00 /mh	487	15.00 /tube	1,787	-	-	-	-	-	-	-	2,273	2,468
Clarifier Sidewalks 051-C-1001		34.26 cy		11,894		18,456	/cy				370			30,720	35,485
0302- Concrete Pavement 051-C-1001															
5000 psi Concrete	3310.100	324.11 cy	-	-	-	167.00 /cy	57,914	-	-	-	-	-	-	57,914	57,914
Slab Placement Count	3310.360	7.00 ea	-	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
Pump Place Slab on Grade	3310.230	324.11 cy	31.00 /mh	6,988	-	-	-	-	-	-	-	31.26 /cy	10,841	17,829	20,624
Formwork S.O.G. Edge Form < 1'	3100.120	809.36 sf	31.00 /mh	8,029	1.50 /sf	1,275	-	-	-	-	-	-	-	9,304	12,515
Formwork S.O.G. Const Joints < 1'	3100.120	129.31 sf	31.00 /mh	1,844	1.50 /sf	204	-	-	-	-	-	-	-	2,048	2,785
CJ Prep Slab	3350.170	129.31 sf	31.00 /mh	100	0.15 /sf	19	-	-	-	-	-	-	-	120	160
Finegrade Below Concrete	3150.650	13,061.00 sf	31.00 /mh	8,098	-	-	-	-	-	-	-	-	-	8,098	11,337
Finish- Hard Trowel	3350.110	13,061.00 sf	31.00 /mh	5,668	/sf	-	-	-	-	-	-	-	-	5,668	7,936
Liquid Curing Compounds	3390.170	13,061.00 sf	31.00 /mh	810	0.06 /sf	784	-	-	-	-	-	-	-	1,593	1,917

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- Concrete Pavement 051-C-1001														
	Blockouts in Concrete	3150.194	72.00 sf	31.00 /mh	781	2.00 /sf	144	-	-	-	-	-	-	925	1,238
	Expansion Joint	3150.720	254.60 sf	31.00 /mh	395	6.00 /sf	1,604	-	-	-	-	-	-	1,999	2,156
	Expansion Joint Sealant	3150.720	380.00 lf	31.00 /mh	589	2.00 /lf	798	-	-	-	-	-	-	1,387	1,623
	Oil SOG Form	3100.310	938.67 sf	31.00 /mh	0	0.02 /sf	19	-	-	-	-	-	-	19	19
	Nails and Hardware	3150.200	809.36 sf	31.00 /mh	0	0.04 /sf	32	-	-	-	-	-	-	33	33
	Dimension Lumber	3150.200	809.36 sf	31.00 /mh	0	0.50 /sf	405	-	-	-	-	-	-	405	405
	Saw Cut S-O-G	3350.160	2,528.00 lf	31.00 /mh	2,351	0.50 /lf	1,264	-	-	0.50 /lf	1,264	-	-	4,879	5,845
	SOG Rebar	3210.104	40.51 tn	31.00 /mh	31,398	1,400.00 /tn	59,556	-	-	-	-	-	-	90,954	103,514
	Drill and Epoxy #5	3210.101	380.00 ea	31.00 /mh	3,534	5.00 /ea	1,995	-	-	-	-	-	-	5,529	6,943
	Smooth Dowels 1-1/4"	3210.106	380.00 ea	31.00 /mh	5,890	21.00 /ea	7,980	-	-	-	-	-	-	13,870	16,226
	Hardener	3310.110	324.00 cy	-	-	10.00 /cy	3,467	-	-	-	-	-	-	3,467	3,467
	Concrete Pavement 051-C-1001		324.11 cy		76,476		137,459	/cy			1,264		10,841	226,040	256,656
	0302- 051-C-1002 Sidewalks														
	5000 psi Concrete	3310.100	87.04 cy	-	-	167.00 /cy	15,553	-	-	-	-	-	-	15,553	15,553
	Truck Place Slab on Grade	3310.230	87.04 cy	31.00 /mh	1,877	-	-	-	-	-	-	-	-	1,877	2,627
	Formwork S.O.G. Edge Form < 1'	3100.120	945.00 sf	31.00 /mh	9,374	1.50 /sf	1,488	-	-	-	-	-	-	10,863	14,613
	Formwork S.O.G. Const Joints < 1'	3100.120	50.00 sf	31.00 /mh	713	1.50 /sf	79	-	-	-	-	-	-	792	1,077
	CJ Prep Slab	3350.170	50.00 sf	31.00 /mh	39	0.15 /sf	8	-	-	-	-	-	-	46	62
	Finegrade Below Concrete	3150.650	4,700.00 sf	31.00 /mh	2,914	-	-	-	-	-	-	-	-	2,914	4,080
	Finish- Hard Trowel	3350.110	4,700.00 sf	31.00 /mh	2,040	/sf	-	-	-	-	-	-	-	2,040	2,856
	Liquid Curing Compounds	3390.170	4,700.00 sf	31.00 /mh	291	0.06 /sf	282	-	-	-	-	-	-	573	690
	Blockouts in Concrete	3150.194	50.00 sf	31.00 /mh	543	2.00 /sf	100	-	-	-	-	-	-	643	860
	Road Base Below Concrete	2305.300	131.00 cy	31.00 /mh	1,595	22.00 /ton	5,706	-	-	-	-	-	-	7,301	7,939
	Expansion Joint	3150.720	304.00 sf	31.00 /mh	188	6.00 /sf	1,915	-	-	-	-	-	-	2,104	2,179
	Expansion Joint Sealant	3150.720	608.00 lf	31.00 /mh	188	2.00 /lf	1,277	-	-	-	-	-	-	1,465	1,541
	Oil SOG Form	3100.310	995.00 sf	31.00 /mh	0	0.02 /sf	20	-	-	-	-	-	-	20	20
	Nails and Hardware	3150.200	945.00 sf	31.00 /mh	0	0.04 /sf	38	-	-	-	-	-	-	38	38
	Dimension Lumber	3150.200	945.00 sf	31.00 /mh	0	0.50 /sf	473	-	-	-	-	-	-	473	473
	Saw Cut S-O-G	3350.160	1,880.00 lf	31.00 /mh	1,748	0.50 /lf	940	-	-	0.50 /lf	940	-	-	3,628	4,347
	SOG Rebar	3210.104	8.70 tn	31.00 /mh	6,746	1,400.00 /tn	12,795	-	-	-	-	-	-	19,540	22,238
	Drill and Epoxy #5	3210.101	608.00 ea	31.00 /mh	5,654	5.00 /ea	3,192	-	-	-	-	-	-	8,846	11,108
	051-C-1002 Sidewalks		87.04 cy		33,911		43,865	/cy			940			78,716	92,299
	0302- Valley Pad 051-C-1002														
	5000 psi Concrete	3310.100	11.17 cy	-	-	167.00 /cy	1,995	-	-	-	-	-	-	1,995	1,995
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Truck Place Slab on Grade	3310.230	11.17 cy	31.00 /mh	241	-	-	-	-	-	-	-	-	241	337
	Formwork S.O.G. Edge Form < 1'	3100.120	205.02 sf	31.00 /mh	2,034	1.50 /sf	323	-	-	-	-	-	-	2,357	3,170
	Formwork S.O.G. Const Joints < 1'	3100.120	10.05 sf	31.00 /mh	143	1.50 /sf	16	-	-	-	-	-	-	159	216
	CJ Prep Slab	3350.170	10.05 sf	31.00 /mh	8	0.15 /sf	2	-	-	-	-	-	-	9	12
	Finegrade Below Concrete	3150.650	450.00 sf	31.00 /mh	279	-	-	-	-	-	-	-	-	279	391
	Finish- Hard Trowel	3350.110	450.00 sf	31.00 /mh	195	/sf	-	-	-	-	-	-	-	195	273
	Liquid Curing Compounds	3390.170	450.00 sf	31.00 /mh	28	0.06 /sf	27	-	-	-	-	-	-	55	66
	Oil SOG Form	3100.310	215.07 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Nails and Hardware	3150.200	205.02 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Dimension Lumber	3150.200	205.02 sf	31.00 /mh	0	0.50 /sf	103	-	-	-	-	-	-	103	103
	Saw Cut S-O-G	3350.160	150.00 lf	31.00 /mh	140	0.50 /lf	75	-	-	0.50 /lf	75	-	-	290	347
	SOG Rebar	3210.104	1.40 tn	31.00 /mh	1,082	1,400.00 /tn	2,052	-	-	-	-	-	-	3,134	3,567
	Valley Pad 051-C-1002		11.17 cy		4,149		4,605	/cy			75			8,830	10,491
	0302- Generator Pads (3ea) and transformer pads 3ea														
	5000 psi Concrete	3310.100	84.00 cy	-	-	167.00 /cy	15,010	-	-	-	-	-	-	15,010	15,010
	Slab Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	84.00 cy	31.00 /mh	2,229	-	-	-	-	-	-	31.26 /cy	2,810	5,039	5,930
	Formwork S.O.G. Edge Form > 1'	3100.120	594.00 sf	31.00 /mh	5,892	1.50 /sf	936	-	-	-	-	-	-	6,828	9,185
	Finegrade Below Concrete	3150.650	1,512.00 sf	31.00 /mh	937	-	-	-	-	-	-	-	-	937	1,312
	Finish- Hard Trowel	3350.110	1,512.00 sf	31.00 /mh	656	/sf	-	-	-	-	-	-	-	656	919
	Liquid Curing Compounds	3390.170	1,512.00 sf	31.00 /mh	94	0.06 /sf	91	-	-	-	-	-	-	184	222
	Blockouts in Concrete	3150.194	144.00 sf	31.00 /mh	1,562	2.00 /sf	288	-	-	-	-	-	-	1,850	2,475
	Chamfer 3/4"	3150.625	396.00 lf	31.00 /mh	614	0.20 /lf	83	-	-	-	-	-	-	697	942
	Road Base Below Concrete	2305.300	112.00 cy	31.00 /mh	1,736	22.00 /ton	4,879	-	-	-	-	-	-	6,615	7,309
	Oil SOG Form	3100.310	594.00 sf	31.00 /mh	0	0.02 /sf	12	-	-	-	-	-	-	12	12
	Nails and Hardware	3150.200	594.00 sf	31.00 /mh	0	0.04 /sf	24	-	-	-	-	-	-	24	24
	Dimension Lumber	3150.200	594.00 sf	31.00 /mh	0	0.50 /sf	297	-	-	-	-	-	-	297	297
	SOG Rebar	3210.104	10.50 tn	31.00 /mh	8,138	1,400.00 /tn	15,435	-	-	-	-	-	-	23,573	26,828
	Generator Pads (3ea) and transformer pads 3ea		84.00 cy		21,859		37,054	/cy					2,810	61,723	70,466
	Concrete Concrete				180,742		280,421				3,334		13,650	478,148	550,511
	Sidewalk Sidewalk														
	0302-A Replace Sidewalks Around Existing Digesters & Clarifiers														
	3500 psi Concrete	3310.100	34.26 cy	-	-	165.00 /cy	6,049	-	-	-	-	-	-	6,049	6,049
	Slab Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302-A	Replace Sidewalks Around Existing Digesters & Clarifiers														
	Truck Place Slab on Grade	3310.230	34.26 cy	31.00 /mh	739	-	-	-	-	-	-	-	-	739	1,034
	Formwork S.O.G. Edge Form < 1'	3100.120	380.00 sf	31.00 /mh	3,770	1.50 /sf	599	-	-	-	-	-	-	4,368	5,876
	Formwork S.O.G. Const Joints < 1'	3100.120	15.00 sf	31.00 /mh	214	1.50 /sf	24	-	-	-	-	-	-	238	323
	CJ Prep Slab	3350.170	15.00 sf	31.00 /mh	12	0.15 /sf	2	-	-	-	-	-	-	14	19
	Finegrade Below Concrete	3150.650	1,850.00 sf	31.00 /mh	803	-	-	-	-	-	-	-	-	803	1,124
	Finish- Broom	3350.110	1,850.00 sf	31.00 /mh	803	0.01 /sf	11	-	-	-	-	-	-	814	1,135
	Liquid Curing Compounds	3390.170	1,850.00 sf	31.00 /mh	115	0.06 /sf	111	-	-	-	-	-	-	226	272
	Road Base Below Concrete	2305.300	34.26 cy	31.00 /mh	531	22.00 /ton	1,492	-	-	-	-	-	-	2,023	2,236
	Expansion Joint	3150.720	185.00 sf	31.00 /mh	574	6.00 /sf	1,166	-	-	-	-	-	-	1,739	1,968
	Expansion Joint Sealant	3150.720	370.00 lf	31.00 /mh	1,147	2.00 /lf	777	-	-	-	-	-	-	1,924	2,383
	Oil SOG Form	3100.310	395.00 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	380.00 sf	31.00 /mh	0	0.04 /sf	15	-	-	-	-	-	-	15	15
	Saw Cut S-O-G	3350.160	320.00 lf	31.00 /mh	298	0.50 /lf	160	-	-	0.50 /lf	160	-	-	618	740
	SOG Rebar	3210.104	2.30 tn	31.00 /mh	1,783	1,400.00 /tn	3,381	-	-	-	-	-	-	5,164	5,876
	Drill and Epoxy #5	3210.101	380.00 ea	31.00 /mh	3,534	4.00 /ea	1,596	-	-	-	-	-	-	5,130	6,544
	Replace Sidewalks Around Existing Digesters & Clarifiers		34.26 cy		14,320		15,390	/cy			160			29,870	35,601
	Sidewalk Sidewalk				14,320		15,390				160			29,870	35,601
051	Site Civil				195,063		295,811	/LS			3,494		13,650	508,018	586,113
100	Headworks														
	Concrete Concrete														
0302-	Headworks Base Slab														
	5000 psi Concrete	3310.100	320.00 cy	-	-	165.00 /cy	56,496	-	-	-	-	-	-	56,496	56,496
	Slab Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	320.00 cy	31.00 /mh	5,307	-	-	-	-	-	-	31.26 /cy	10,703	16,011	18,134
	Formwork S.O.G. Edge Form > 1'	3100.120	942.00 sf	31.00 /mh	9,345	1.50 /sf	1,484	-	-	-	-	-	-	10,828	14,566
	Formwork S.O.G. Const Joints > 1'	3100.120	339.00 sf	31.00 /mh	4,834	1.50 /sf	534	-	-	-	-	-	-	5,368	7,302
	CJ Prep Slab	3350.170	339.00 sf	31.00 /mh	263	0.15 /sf	51	-	-	-	-	-	-	314	419
	Finegrade Below Concrete	3150.650	3,514.00 sf	31.00 /mh	2,179	-	-	-	-	-	-	-	-	2,179	3,050
	Finish- Hard Trowel	3350.110	3,514.00 sf	31.00 /mh	1,525	/sf	-	-	-	-	-	-	-	1,525	2,135
	Liquid Curing Compounds	3390.170	3,514.00 sf	31.00 /mh	218	0.06 /sf	211	-	-	-	-	-	-	429	516
	Blockouts in Concrete	3150.194	120.00 sf	31.00 /mh	1,302	2.00 /sf	240	-	-	-	-	-	-	1,542	2,063
	Waterstop 6" Flat	3510.610	353.00 lf	31.00 /mh	1,094	5.00 /lf	1,853	-	-	-	-	-	-	2,948	3,385
	Oil SOG Form	3100.310	1,425.00 sf	31.00 /mh	0	0.02 /sf	29	-	-	-	-	-	-	29	29
	Nails and Hardware	3150.200	942.00 sf	31.00 /mh	0	0.04 /sf	38	-	-	-	-	-	-	38	38
	Dimension Lumber	3150.200	942.00 sf	31.00 /mh	0	0.50 /sf	471	-	-	-	-	-	-	471	471
	Waterstop Fittings	3510.610	15.00 ea	31.00 /mh	930	55.00 /ea	866	-	-	-	-	-	-	1,796	2,168
	Headworks Base Slab		320.00 cy		26,998		62,272	/cy					10,703	99,973	110,772
0302-	Grit Chamber Deck														
	5000 psi Concrete	3310.100	11.11 cy	-	-	165.00 /cy	1,962	-	-	-	-	-	-	1,962	1,962
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	11.11 cy	31.00 /mh	369	-	-	-	-	-	-	31.26 /cy	372	740	888
	Formwork S.O.G. Edge Form > 1'	3100.120	90.00 sf	31.00 /mh	977	1.50 /sf	142	-	-	-	-	-	-	1,118	1,509
	Formwork S.O.G. Const Joints > 1'	3100.120	90.00 sf	31.00 /mh	1,283	1.50 /sf	142	-	-	-	-	-	-	1,425	1,939
	CJ Prep Slab	3350.170	90.00 sf	31.00 /mh	70	0.15 /sf	14	-	-	-	-	-	-	83	111
	Finegrade Below Concrete	3150.650	200.00 sf	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Finish- Hard Trowel	3350.110	200.00 sf	31.00 /mh	87	/sf	-	-	-	-	-	-	-	87	122
	Liquid Curing Compounds	3390.170	200.00 sf	31.00 /mh	12	0.06 /sf	12	-	-	-	-	-	-	24	29
	Blockouts in Concrete	3150.194	24.00 sf	31.00 /mh	260	2.00 /sf	48	-	-	-	-	-	-	308	413
	Waterstop 6" Flat	3510.610	120.00 lf	31.00 /mh	372	5.00 /lf	630	-	-	-	-	-	-	1,002	1,151
	Oil SOG Form	3100.310	180.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Nails and Hardware	3150.200	90.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	90.00 sf	31.00 /mh	0	0.50 /sf	45	-	-	-	-	-	-	45	45
	Waterstop Fittings	3510.610	4.00 ea	31.00 /mh	248	55.00 /ea	231	-	-	-	-	-	-	479	578
	Grit Chamber Deck		11.11 cy		3,802		3,232	/cy					372	7,405	8,926
0302-	Void Form under Grit and Screenign slabs														
	Slab Void - Foam Void Under Slabs	3100.320	7,200.00 cf	31.00 /mh	4,464	5.00 /cf	39,600	-	-	-	-	-	-	44,064	45,850
	Void Form under Grit and Screenign slabs				4,464		39,600	/cy						44,064	45,850
0302-	Headworks HVAC Pad														
	5000 psi Concrete	3310.100	6.22 cy	-	-	165.00 /cy	1,099	-	-	-	-	-	-	1,099	1,099
	Crane Place Slab on Grade	3310.230	6.22 cy	31.00 /mh	206	-	-	-	-	-	-	-	-	206	289
	Formwork S.O.G. Edge Form > 1'	3100.120	66.00 sf	31.00 /mh	716	1.50 /sf	104	-	-	-	-	-	-	820	1,107
	Finegrade Below Concrete	3150.650	112.00 sf	31.00 /mh	69	-	-	-	-	-	-	-	-	69	97
	Finish- Hard Trowel	3350.110	112.00 sf	31.00 /mh	49	/sf	-	-	-	-	-	-	-	49	68
	Liquid Curing Compounds	3390.170	112.00 sf	31.00 /mh	7	0.06 /sf	7	-	-	-	-	-	-	14	16
	Blockouts in Concrete	3150.194	8.00 sf	31.00 /mh	87	2.00 /sf	16	-	-	-	-	-	-	103	138
	Chamfer 3/4"	3150.625	44.00 lf	31.00 /mh	68	0.20 /lf	9	-	-	-	-	-	-	77	105
	Road Base Below Concrete	2305.300	4.15 cy	31.00 /mh	51	22.00 /ton	181	-	-	-	-	-	-	231	251
	Oil SOG Form	3100.310	66.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302-	Headworks HVAC Pad														
	Nails and Hardware	3150.200	66.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	66.00 sf	31.00 /mh	0	0.50 /sf	33	-	-	-	-	-	-	33	33
	SOG Rebar	3210.104	0.78 tn	31.00 /mh	603	1,400.00 /tn	1,144	-	-	-	-	-	-	1,747	1,988
	Headworks HVAC Pad		6.22 cy		1,856		2,596	/cy						4,452	5,194
0302-B	Headworks and Grit Channel fill concrete														
	4500 psi Concrete Fill Grout	3310.100	19.00 cy	-	-	195.00 /cy	3,964	-	-	-	-	-	-	3,964	3,964
	Pump Place Slab on Grade	3310.230	19.00 cy	31.00 /mh	788	-	-	-	-	-	-	31.26 /cy	636	1,423	1,738
	Formwork S.O.G. Edge Form > 1'	3100.120	544.00 sf	31.00 /mh	4,216	1.50 /sf	857	-	-	-	-	-	-	5,073	6,759
	Formwork S.O.G. Edge Form < 1'	3100.120	50.00 sf	31.00 /mh	388	1.50 /sf	79	-	-	-	-	-	-	466	621
	Finish- Hard Trowel	3350.110	192.00 sf	31.00 /mh	83	/sf		-	-	-	-	-	-	83	117
	Liquid Curing Compounds	3390.170	192.00 sf	31.00 /mh	12	0.06 /sf	12	-	-	-	-	-	-	23	28
	Oil SOG Form	3100.310	594.00 sf	31.00 /mh	0	0.02 /sf	12	-	-	-	-	-	-	12	12
	Nails and Hardware	3150.200	594.00 sf	31.00 /mh	0	0.04 /sf	24	-	-	-	-	-	-	24	24
	Dimension Lumber	3150.200	594.00 sf	31.00 /mh	0	0.50 /sf	297	-	-	-	-	-	-	297	297
	CJ Prep Slab	3350.170	192.00 sf	31.00 /mh	149	0.15 /sf	29	-	-	-	-	-	-	178	237
	Fiber reinforcing for fill grout	3310.110	19.00 cy	-	-	25.00 /cy	508	-	-	-	-	-	-	508	508
	Headworks and Grit Channel fill concrete		19.00 cy		5,636		5,781	/cy					636	12,052	14,307
0303-	Headworks Lower Level Walls														
	Pump Place Walls	3310.260	436.00 cy	31.00 /mh	9,834	-	-	-	-	-	-	31.26 /cy	14,583	24,418	28,351
	5000 psi Concrete	3310.100	436.00 cy	-	-	165.00 /cy	76,976	-	-	-	-	-	-	76,976	76,976
	Wall Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Gang Form System 12-16'	3100.180	7,140.00 sf	31.00 /mh	39,841	2.50 /sf	18,743	-	-	-	-	-	-	58,584	74,520
	Gang Form System 16'->	3100.180	10,620.00 sf	31.00 /mh	59,260	2.50 /sf	27,878	-	-	-	-	-	-	87,137	110,841
	Wall Bulkhead Forms	3150.192	297.92 sf	31.00 /mh	4,248	1.50 /sf	469	-	-	-	-	-	-	4,718	6,417
	CJ Prep Walls	3350.170	976.22 sf	31.00 /mh	757	0.15 /sf	146	-	-	-	-	-	-	903	1,206
	Finish- Top of Wall	3350.110	678.30 sf	31.00 /mh	294	/sf		-	-	-	-	-	-	294	412
	Liquid Curing Walls	3390.170	18,440.00 sf	31.00 /mh	572	0.06 /sf	1,106	-	-	-	-	-	-	1,678	1,907
	Grind/Patch Walls	3350.130	17,760.00 sf	31.00 /mh	6,607	0.05 /sf	888	-	-	-	-	-	-	7,495	10,137
	Blockouts in Concrete	3150.194	314.00 sf	31.00 /mh	3,407	2.00 /sf	628	-	-	-	-	-	-	4,035	5,398
	Waterstop 6" Flat	3510.610	353.00 lf	31.00 /lf	1,094	5.00 /lf	1,853	-	-	-	-	-	-	2,948	3,385
	Chamfer 3/4"	3150.625	28.00 lf	31.00 /mh	43	0.20 /lf	6	-	-	-	-	-	-	49	67
	Rub Walls	3350.140	8,880.00 sf	31.00 /mh	11,011	0.15 /sf	1,332	-	-	-	-	-	-	12,343	16,748
	Oil Wall Forms	3100.310	17,760.00 sf	31.00 /mh	6	0.02 /sf	355	-	-	-	-	-	-	361	363
	Nails and Hardware	3150.200	17,760.00 sf	31.00 /mh	6	0.04 /sf	710	-	-	-	-	-	-	716	718
	Form Ties 16"	3150.632	4,180.00 ea	31.00 /mh	1	2.50 /ea	10,450	-	-	-	-	-	-	10,451	10,452
	Dimension Lumber	3150.200	17,760.00 sf	31.00 /mh	6	0.50 /sf	8,880	-	-	-	-	-	-	8,886	8,888
	Rebar Templates	3200.980	550.00 lf	31.00 /mh	853	0.50 /lf	275	-	-	-	-	-	-	1,128	1,469
	Rebar Formsavers # 5	3210.108	224.00 ea	31.00 /mh	2,292	27.00 /ea	6,048	-	-	-	-	-	-	8,340	9,256
	Dovetail Slots	4080.150	2,400.00 lf	31.00 /mh	7,440	3.00 /lf	7,560	-	-	-	-	-	-	15,000	17,976
	Bonding agent, and prep Tie holes	3350.130	1,500.00 ea	31.00 /mh	6,975	2.00 /ea	3,000	-	-	-	-	-	-	9,975	12,765
	Grout Slurry bottom of walls	3150.200	272.00 cf	31.00 /mh	2,108	15.00 /cf	4,080	-	-	-	-	-	-	6,188	7,031
	Waterstop Fittings	3510.610	12.00 ea	31.00 /mh	744	55.00 /ea	693	-	-	-	-	-	-	1,437	1,735
	Form Special blockouts for doors	3150.200	1.00 ls	31.00 /mh	31	3,500.00 /ls	3,500	-	-	-	-	-	-	3,531	3,543
	Headworks Lower Level Walls		401.96 cy		157,428		175,577	/cy					14,583	347,588	410,560
0303-	Concrete Channel Walls														
	Pump Place Walls	3310.260	150.54 cy	31.00 /mh	3,995	-	-	-	-	-	-	31.26 /cy	5,035	9,030	10,628
	5000 psi Concrete	3310.100	150.54 cy	-	-	165.00 /cy	26,578	-	-	-	-	-	-	26,578	26,578
	Wall Placement Count	3310.360	10.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Rented Form System 0-4'	3100.180	2,448.00 sf	31.00 /mh	15,178	1.50 /sf	3,856	-	-	-	-	-	-	19,033	25,104
	Rented Form System 4-8'	3100.180	3,424.16 sf	31.00 /mh	21,230	1.50 /sf	5,393	-	-	-	-	-	-	26,623	35,115
	Wall Bulkhead Forms	3150.192	161.31 sf	31.00 /mh	2,300	1.50 /sf	254	-	-	-	-	-	-	2,554	3,474
	CJ Prep Walls	3350.170	924.18 sf	31.00 /mh	716	0.15 /sf	139	-	-	-	-	-	-	855	1,141
	Finish- Top of Wall	3350.110	762.87 sf	31.00 /mh	331	/sf		-	-	-	-	-	-	331	464
	Liquid Curing Walls	3390.170	6,635.03 sf	31.00 /mh	206	0.06 /sf	398	-	-	-	-	-	-	604	686
	Grind/Patch Walls	3350.130	5,872.16 sf	31.00 /mh	2,184	0.05 /sf	294	-	-	-	-	-	-	2,478	3,352
	Blockouts in Concrete	3150.194	360.00 sf	31.00 /mh	3,906	2.00 /sf	720	-	-	-	-	-	-	4,626	6,188
	Waterstop 6" Flat	3510.610	662.32 lf	31.00 /mh	2,053	5.00 /lf	3,477	-	-	-	-	-	-	5,530	6,352
	Rub Walls	3350.140	2,936.08 sf	31.00 /mh	3,641	0.15 /sf	440	-	-	-	-	-	-	4,081	5,537
	Oil Wall Forms	3100.310	5,872.16 sf	31.00 /mh	2	0.02 /sf	117	-	-	-	-	-	-	119	120
	Nails and Hardware	3150.200	5,872.16 sf	31.00 /mh	2	0.04 /sf	235	-	-	-	-	-	-	237	237
	Form Ties 16"	3150.632	1,113.40 ea	31.00 /mh	0	2.50 /ea	2,784	-	-	-	-	-	-	2,784	2,784
	Form Ties 18"	3150.632	240.00 ea	31.00 /mh	0	2.55 /ea	612	-	-	-	-	-	-	612	612
	Form Ties 20"	3150.632	114.64 ea	31.00 /mh	0	2.80 /ea	321	-	-	-	-	-	-	321	321
	Dimension Lumber	3150.200	5,872.16 sf	31.00 /mh	2	0.50 /sf	2,936	-	-	-	-	-	-	2,938	2,939
	Rebar Templates	3200.980	547.00 lf	31.00 /mh	848	0.50 /lf	274	-	-	-	-	-	-	1,121	1,460
	Form Ties Specialty radius in corner	3150.632	6.00 ea	31.00 /mh	4,464	500.00 /ea	3,000	-	-	-	-	-	-	7,464	9,250
	Grout Slurry bottom of walls	3150.200	180.00 cf	31.00 /mh	1,395	15.00 /cf	2,700	-	-	-	-	-	-	4,095	4,653
	Waterstop Fittings	3510.610	18.00 ea	31.00 /mh	1,116	55.00 /ea	1,040	-	-	-	-	-	-	2,156	2,602
	Concrete Channel Walls		150.54 cy		63,569		55,566	/cy					5,035	124,170	149,598
0304-	Channel Bottom Elevated deck														
	5000 psi Concrete	3310.100	91.00 cy	-	-	165.00 /cy	16,066	-	-	-	-	-	-	16,066	16,066

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0304- Channel Bottom Elevated deck														
	Slab Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Suspended Slab	3310.240	91.00 cy	31.00 /mh	2,415	-	-	-	-	-	-	31.26 /cy	3,044	5,459	6,424
	Shore Suspended Slab 0-15'	3100.124	1,633.00 sf	31.00 /mh	20,249	4.25 /sf	7,287	-	-	-	-	-	-	27,536	35,636
	Slab Edge Form > 1'	3100.124	360.00 sf	31.00 /mh	6,696	2.00 /sf	720	-	-	-	-	-	-	7,416	10,094
	Suspended Slab Const Joint	3100.124	21.00 sf	31.00 /mh	228	1.50 /sf	32	-	-	-	-	-	-	259	350
	CJ Prep Elevated Slab CJ	3350.170	21.00 sf	31.00 /mh	16	0.20 /sf	4	-	-	-	-	-	-	20	27
	Finish- Hard Trowel	3350.110	1,633.00 sf	31.00 /mh	709	/sf		-	-	-	-	-	-	709	992
	Liquid Curing Compounds	3390.170	1,633.00 sf	31.00 /mh	101	0.06 /sf	98	-	-	-	-	-	-	199	240
	Grind and Patch Deck Bottom	3350.130	1,633.00 sf	31.00 /mh	607	0.05 /sf	82	-	-	-	-	-	-	689	932
	Blockouts in Concrete	3150.194	192.00 sf	31.00 /mh	2,083	2.00 /sf	384	-	-	-	-	-	-	2,467	3,300
	Waterstop 6" Flat	3510.610	594.00 lf	31.00 /mh	1,841	5.00 /lf	3,119	-	-	-	-	-	-	4,960	5,696
	Oil Suspended Slab Frm	3100.310	1,633.00 sf	31.00 /mh	1	0.02 /sf	33	-	-	-	-	-	-	33	33
	Nails and Hardware	3150.200	1,633.00 sf	31.00 /mh	1	0.04 /sf	65	-	-	-	-	-	-	66	66
	Rub Slab Bottom	3350.140	1,633.00 sf	31.00 /mh	1,519	0.12 /sf	196	-	-	-	-	-	-	1,715	2,322
	Inverted Keyway	3150.620	440.00 lf	31.00 /mh	1,364	2.00 /lf	924	-	-	-	-	-	-	2,288	2,834
	Beam Side Forms	3100.140	80.00 sf	31.00 /mh	992	1.50 /sf	126	-	-	-	-	-	-	1,118	1,515
	Beam Bottom Forms	3100.140	40.00 sf	31.00 /mh	496	4.25 /sf	179	-	-	-	-	-	-	675	873
	Channel Bottom Elevated deck		80.72 cy		39,318		29,314	/cy					3,044	71,675	87,402
	0304- Headworks Eleveated deck at 56.33														
	5000 psi Concrete	3310.100	128.50 cy	-	-	165.00 /cy	22,687	-	-	-	-	-	-	22,687	22,687
	Slab Placement Count	3310.360	11.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Suspended Slab	3310.240	128.50 cy	31.00 /mh	3,197	-	-	-	-	-	-	31.26 /cy	4,298	7,495	8,774
	Shore Suspended Slab 0-15'	3100.124	250.00 sf	31.00 /mh	3,100	4.25 /sf	1,116	-	-	-	-	-	-	4,216	5,456
	Shore Suspended Slab 15-up	3100.124	1,466.00 sf	31.00 /mh	18,178	4.25 /sf	6,542	-	-	-	-	-	-	24,720	31,992
	Slab Edge Form > 1'	3100.124	870.00 sf	31.00 /mh	16,182	2.00 /sf	1,740	-	-	-	-	-	-	17,922	24,395
	Suspended Slab Const Joint	3100.124	100.50 sf	31.00 /mh	1,433	1.50 /sf	151	-	-	-	-	-	-	1,584	2,157
	CJ Prep Elevated Slab CJ	3350.170	100.50 sf	31.00 /mh	78	0.20 /sf	20	-	-	-	-	-	-	98	129
	Finish- Hard Trowel	3350.110	2,313.00 sf	31.00 /mh	1,004	/sf		-	-	-	-	-	-	1,004	1,405
	Liquid Curing Compounds	3390.170	2,313.00 sf	31.00 /mh	143	0.06 /sf	139	-	-	-	-	-	-	282	340
	Grind and Patch Deck Bottom	3350.130	2,313.00 sf	31.00 /mh	860	0.05 /sf	116	-	-	-	-	-	-	976	1,320
	Blockouts in Concrete	3150.194	80.00 sf	31.00 /mh	868	2.00 /sf	160	-	-	-	-	-	-	1,028	1,375
	Oil Suspended Slab Frm	3100.310	2,313.00 sf	31.00 /mh	1	0.02 /sf	46	-	-	-	-	-	-	47	47
	Nails and Hardware	3150.200	2,313.00 sf	31.00 /mh	1	0.04 /sf	93	-	-	-	-	-	-	93	94
	Rub Slab Bottom	3350.140	1,466.00 sf	31.00 /mh	1,363	0.12 /sf	176	-	-	-	-	-	-	1,539	2,085
	Beam Side Forms	3100.140	16.00 sf	31.00 /mh	198	1.50 /sf	25	-	-	-	-	-	-	224	303
	Headworks Eleveated deck at 56.33		128.50 cy		46,607		33,010	/cy					4,298	83,915	102,558
	0307- Grit Room Columns														
	5000 psi Concrete	3310.100	5.33 cy	-	-	165.00 /cy	941	-	-	-	-	-	-	941	941
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Piers & Columns	3310.270	5.33 cy	31.00 /mh	354	-	-	-	-	-	-	31.26 /cy	178	532	674
	Formwork Rectangle Columns 16 -20'	3100.110	288.00 sf	31.00 /mh	1,786	1.50 /sf	454	-	-	-	-	-	-	2,239	2,953
	Liquid Curing Compounds	3390.170	288.00 sf	31.00 /mh	18	0.06 /sf	17	-	-	-	-	-	-	35	42
	Grind/Patch Columns	3350.130	288.00 sf	31.00 /mh	133	0.05 /sf	14	-	-	-	-	-	-	147	201
	Chamfer 3/4"	3150.625	144.00 lf	31.00 /mh	223	0.20 /lf	30	-	-	-	-	-	-	253	343
	Oil Column Forms	3100.310	288.00 sf	31.00 /mh	0	0.02 /sf	6	-	-	-	-	-	-	6	6
	Dimension Lumber	3150.200	288.00 sf	31.00 /mh	0	0.50 /sf	144	-	-	-	-	-	-	144	144
	Nails and Hardware	3150.200	288.00 sf	31.00 /mh	0	0.04 /sf	12	-	-	-	-	-	-	12	12
	Grit Room Columns		5.33 cy		2,514		1,618	/cy					178	4,310	5,316
	0309- Grit Chamber Radius Walls														
	Pump Place Walls	3310.260	10.47 cy	31.00 /mh	347	-	-	-	-	-	-	31.26 /cy	350	698	837
	5000 psi Concrete	3310.100	10.47 cy	-	-	165.00 /cy	1,849	-	-	-	-	-	-	1,849	1,849
	Wall Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Job Built with Plyform 4-8'	3100.180	376.99 sf	31.00 /mh	3,506	1.50 /sf	594	-	-	-	-	-	-	4,100	5,502
	Job Built with Plyform 8-12'	3100.180	188.50 sf	31.00 /mh	1,461	1.50 /sf	297	-	-	-	-	-	-	1,758	2,342
	CJ Prep Walls	3350.170	40.84 sf	31.00 /mh	32	0.15 /sf	6	-	-	-	-	-	-	38	50
	Finish- Top of Wall	3350.110	40.84 sf	31.00 /mh	18	/sf		-	-	-	-	-	-	18	25
	Liquid Curing Walls	3390.170	606.33 sf	31.00 /mh	19	0.06 /sf	36	-	-	-	-	-	-	55	63
	Grind/Patch Walls	3350.130	565.49 sf	31.00 /mh	210	0.05 /sf	28	-	-	-	-	-	-	239	323
	Waterstop 6" Flat	3510.610	58.00 lf	31.00 /mh	180	5.00 /lf	305	-	-	-	-	-	-	484	556
	Rub Walls	3350.140	204.00 sf	31.00 /mh	253	0.15 /sf	31	-	-	-	-	-	-	284	385
	Oil Wall Forms	3100.310	565.49 sf	31.00 /mh	0	0.02 /sf	11	-	-	-	-	-	-	11	12
	Nails and Hardware	3150.200	565.49 sf	31.00 /mh	0	0.04 /sf	23	-	-	-	-	-	-	23	23
	Form Ties 12"	3150.632	141.37 ea	31.00 /mh	0	2.35 /ea	332	-	-	-	-	-	-	332	332
	Dimension Lumber	3150.200	565.49 sf	31.00 /mh	0	0.50 /sf	283	-	-	-	-	-	-	283	283
	Grout Slurry bottom of walls	3150.200	19.00 cf	31.00 /mh	147	15.00 /cf	285	-	-	-	-	-	-	432	491
	Form Special	3150.200	1.00 ls	31.00 /mh	992	5,000.00 /ls	5,000	-	-	-	-	-	-	5,992	6,389
	Grit Chamber Radius Walls		10.47 cy		7,165		9,079	/cy					350	16,595	19,461
	0310- Headworks Electrical and Equipment Pads														
	Equipment Pad Form 6"	3100.164	175.00 sf	31.00 /mh	1,790	1.50 /sf	276	-	-	-	-	-	-	2,066	2,782
	Oil Equipment Pad Form	3100.310	175.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	5000 psi Concrete	3310.100	8.22 cy	-	-	165.00 /cy	1,452	-	-	-	-	-	-	1,452	1,452

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0310-	Headworks Electrical and Equipment Pads														
	Other Placement Count	3310.360	18.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	8.22 cy	31.00 /mh	546	-	-	-	-	-	-	-	-	546	764
	Liquid Curing Compounds	3390.170	444.00 sf	31.00 /mh	28	0.06 /sf	27	-	-	-	-	-	-	54	65
	Finish- Hard Trowel	3350.110	444.00 sf	31.00 /mh	193	/sf		-	-	-	-	-	-	193	270
	Chamfer	3150.625	350.00 lf	31.00 /mh	162	0.20 /lf	74	-	-	-	-	-	-	235	300
	Misc. Pad Rebar	3210.104	1.03 tn	31.00 /mh	796	1,400.00 /tn	1,509	-	-	-	-	-	-	2,305	2,623
	Nails and Hardware	3150.200	175.00 sf	31.00 /mh	0	0.04 /sf	7	-	-	-	-	-	-	7	7
	Drill and Epoxy #4	3210.101	366.00 ea	31.00 /mh	2,269	4.00 /ea	1,537	-	-	-	-	-	-	3,806	4,714
	Headworks Electrical and Equipment Pads		8.22 cy		5,783		4,885	/cy						10,668	12,981
	Concrete Concrete				365,139		422,529						39,200	826,869	972,924
	100 Headworks				365,139		422,529	/LS					39,200	826,869	972,924
150	Influent Pump Station														
	Concrete Concrete														
0302-	Influent Pump Station Slab on Grade														
	5000 psi Concrete	3310.100	39.59 cy	-	-	165.00 /cy	6,989	-	-	-	-	-	-	6,989	6,989
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	39.59 cy	31.00 /mh	1,050	-	-	-	-	-	-	31.26 /cy	1,324	2,374	2,795
	Formwork S.O.G. Edge Form > 1'	3100.120	258.68 sf	31.00 /mh	2,566	1.50 /sf	407	-	-	-	-	-	-	2,974	4,000
	Finegrade Below Concrete	3150.650	534.41 sf	31.00 /mh	331	-	-	-	-	-	-	-	-	331	464
	Finish- Hard Trowel	3350.110	534.41 sf	31.00 /mh	232	/sf		-	-	-	-	-	-	232	325
	Liquid Curing Compounds	3390.170	534.41 sf	31.00 /mh	33	0.06 /sf	32	-	-	-	-	-	-	65	78
	Waterstop 6" Flat	3510.610	120.00 lf	31.00 /mh	372	5.00 /lf	630	-	-	-	-	-	-	1,002	1,151
	Crushed Rock Below Concrete	2305.300	9.90 cy	31.00 /mh	153	32.00 /ton	592	-	-	-	-	-	-	746	807
	Oil SOG Form	3100.310	258.68 sf	31.00 /mh	0	0.02 /sf	5	-	-	-	-	-	-	5	5
	Nails and Hardware	3150.200	258.68 sf	31.00 /mh	0	0.04 /sf	10	-	-	-	-	-	-	10	10
	Dimension Lumber	3150.200	258.68 sf	31.00 /mh	0	0.50 /sf	129	-	-	-	-	-	-	129	129
	Waterstop Fittings	3510.610	6.00 ea	31.00 /mh	372	55.00 /ea	347	-	-	-	-	-	-	719	867
	Influent Pump Station Slab on Grade		39.59 cy		5,111		9,142	/cy					1,324	15,576	17,621
0302-	Concrete Loading Slab at Influent Pump Station														
	5000 psi Concrete	3310.100	14.78 cy	-	-	165.00 /cy	2,609	-	-	-	-	-	-	2,609	2,609
	Pump Place Slab on Grade	3310.230	14.78 cy	31.00 /mh	588	-	-	-	-	-	-	31.26 /cy	494	1,082	1,318
	Formwork S.O.G. Edge Form > 1'	3100.120	106.40 sf	31.00 /mh	1,154	1.50 /sf	168	-	-	-	-	-	-	1,322	1,784
	Finegrade Below Concrete	3150.650	300.00 sf	31.00 /mh	186	-	-	-	-	-	-	-	-	186	260
	Finish- Hard Trowel	3350.110	300.00 sf	31.00 /mh	130	/sf		-	-	-	-	-	-	130	182
	Liquid Curing Compounds	3390.170	300.00 sf	31.00 /mh	19	0.06 /sf	18	-	-	-	-	-	-	37	44
	Blockouts in Concrete	3150.194	12.00 sf	31.00 /mh	130	2.00 /sf	24	-	-	-	-	-	-	154	206
	Chamfer 3/4"	3150.625	80.00 lf	31.00 /mh	124	0.20 /lf	17	-	-	-	-	-	-	141	190
	Road Base Below Concrete	2305.300	11.11 cy	31.00 /mh	172	22.00 /ton	484	-	-	-	-	-	-	656	725
	Oil SOG Form	3100.310	106.40 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	106.40 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	106.40 sf	31.00 /mh	0	0.50 /sf	53	-	-	-	-	-	-	53	53
	Concrete Loading Slab at Influent Pump Station		14.78 cy		2,504		3,379	/cy					494	6,377	7,379
0302-B	Fill concrete In bottom of Influent Pump Station														
	5000 psi Concrete	3310.100	16.30 cy	-	-	165.00 /cy	2,877	-	-	-	-	-	-	2,877	2,877
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	16.30 cy	31.00 /mh	1,081	-	-	-	-	-	-	31.26 /cy	545	1,626	2,059
	Formwork S.O.G. Edge Form < 1'	3100.120	84.00 sf	31.00 /mh	1,042	1.50 /sf	132	-	-	-	-	-	-	1,174	1,591
	Finish- Hard Trowel	3350.110	440.00 sf	31.00 /mh	191	/sf		-	-	-	-	-	-	191	267
	Liquid Curing Compounds	3390.170	440.00 sf	31.00 /mh	27	0.06 /sf	26	-	-	-	-	-	-	54	65
	Blockouts in Concrete	3150.194	24.00 sf	31.00 /mh	260	2.00 /sf	48	-	-	-	-	-	-	308	413
	Oil SOG Form	3100.310	84.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	84.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	84.00 sf	31.00 /mh	0	0.50 /sf	42	-	-	-	-	-	-	42	42
	CJ Prep Slab	3350.170	440.00 sf	31.00 /mh	341	0.15 /sf	66	-	-	-	-	-	-	407	543
	Fiber Reinforcement grout topping	3310.110	16.00 cy	-	-	25.00 /cy	428	-	-	-	-	-	-	428	428
	Fill concrete In bottom of Influent Pump Station		16.30 cy		2,942		3,625	/cy					545	7,112	8,289
0303-	Influent Pump Station Walls														
	Pump Place Walls	3310.260	160.04 cy	31.00 /mh	3,185	-	-	-	-	-	-	31.26 /cy	5,353	8,538	9,812
	5000 psi Concrete	3310.100	160.04 cy	-	-	165.00 /cy	28,256	-	-	-	-	-	-	28,256	28,256
	Wall Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Gang Form System 16'->	3100.180	6,498.00 sf	31.00 /mh	30,216	2.50 /sf	17,057	-	-	-	-	-	-	47,273	59,359
	Wall Bulkhead Forms	3150.192	113.72 sf	31.00 /mh	1,622	1.50 /sf	179	-	-	-	-	-	-	1,801	2,449
	CJ Prep Walls	3350.170	265.34 sf	31.00 /mh	206	0.15 /sf	40	-	-	-	-	-	-	245	328
	Finish- Top of Wall	3350.110	151.62 sf	31.00 /mh	66	/sf		-	-	-	-	-	-	66	92
	Liquid Curing Walls	3390.170	6,649.62 sf	31.00 /mh	206	0.06 /sf	399	-	-	-	-	-	-	605	688
	Grind/Patch Walls	3350.130	6,498.00 sf	31.00 /mh	2,417	0.05 /sf	325	-	-	-	-	-	-	2,742	3,709
	Blockouts in Concrete	3150.194	80.00 sf	31.00 /mh	868	2.00 /sf	160	-	-	-	-	-	-	1,028	1,375
	Waterstop 6" Flat	3510.610	205.50 lf	31.00 /mh	637	5.00 /lf	1,079	-	-	-	-	-	-	1,716	1,971

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- Influent Pump Station Walls														
	Rub Walls	3350.140	3,249.00 sf	31.00 /mh	4,029	0.15 /sf	487	-	-	-	-	-	-	4,516	6,128
	Oil Wall Forms	3100.310	6,498.00 sf	31.00 /mh	2	0.02 /sf	130	-	-	-	-	-	-	132	133
	Nails and Hardware	3150.200	6,498.00 sf	31.00 /mh	2	0.04 /sf	260	-	-	-	-	-	-	262	263
	Form Ties 16"	3150.632	1,624.50 ea	31.00 /mh	1	2.50 /ea	4,061	-	-	-	-	-	-	4,062	4,062
	Dimension Lumber	3150.200	6,498.00 sf	31.00 /mh	2	0.50 /sf	3,249	-	-	-	-	-	-	3,251	3,252
	Rebar Templates	3200.980	114.00 lf	31.00 /mh	177	0.50 /lf	57	-	-	-	-	-	-	234	304
	Form Liners - HDPE	3150.190	440.00 sf	31.00 /mh	3,410	100.00 /sf	46,200	-	-	-	-	-	-	49,610	50,974
	Grout Slurry bottom of walls	3150.200	57.00 cf	31.00 /mh	442	15.00 /cf	855	-	-	-	-	-	-	1,297	1,473
	Bonding agent and cj prep tie holes	3350.130	550.00 ea	31.00 /mh	2,558	2.00 /ea	1,100	-	-	-	-	-	-	3,658	4,680
	Waterstop Fittings	3510.610	6.00 ea	31.00 /mh	372	55.00 /ea	347	-	-	-	-	-	-	719	867
	Influent Pump Station Walls		160.04 cy		50,416		104,240	/cy					5,353	160,009	180,175
	0304- Influent Pump Station Top Deck														
	5000 psi Concrete	3310.100	16.30 cy	-	-	165.00 /cy	2,877	-	-	-	-	-	-	2,877	2,877
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Suspended Slab	3310.240	16.30 cy	31.00 /mh	676	-	-	-	-	-	-	31.26 /cy	545	1,221	1,491
	Shore Suspended Slab 15-up	3100.124	440.00 sf	31.00 /mh	6,820	4.25 /sf	1,964	-	-	-	-	-	-	8,784	11,512
	Slab Edge Form < 1'	3100.124	84.00 sf	31.00 /mh	1,953	2.00 /sf	176	-	-	-	-	-	-	2,129	2,911
	Finish- Hard Trowel	3350.110	440.00 sf	31.00 /mh	191	/sf		-	-	-	-	-	-	191	267
	Liquid Curing Compounds	3390.170	440.00 sf	31.00 /mh	27	0.06 /sf	26	-	-	-	-	-	-	54	65
	Grind and Patch Deck Bottom	3350.130	440.00 sf	31.00 /mh	164	0.05 /sf	22	-	-	-	-	-	-	186	251
	Blockouts in Concrete	3150.194	76.00 sf	31.00 /mh	825	2.00 /sf	152	-	-	-	-	-	-	977	1,306
	Chamfer 3/4"	3150.625	84.00 lf	31.00 /mh	130	0.20 /lf	18	-	-	-	-	-	-	148	200
	Oil Suspended Slab Frm	3100.310	440.00 sf	31.00 /mh	0	0.02 /sf	9	-	-	-	-	-	-	9	9
	Nails and Hardware	3150.200	440.00 sf	31.00 /mh	0	0.04 /sf	18	-	-	-	-	-	-	18	18
	Rub Slab Bottom	3350.140	440.00 sf	31.00 /mh	409	0.12 /sf	53	-	-	-	-	-	-	462	626
	Influent Pump Station Top Deck		16.30 cy		11,195		5,314	/cy					545	17,054	21,532
	0306- Influent Pump Station Monorail Columns 2ea														
	5000 psi Concrete	3310.100	3.00 cy	-	-	165.00 /cy	530	-	-	-	-	-	-	530	530
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Piers & Columns	3310.270	3.00 cy	31.00 /mh	299	-	-	-	-	-	-	31.26 /cy	100	399	518
	Formwork Sonotube 20"	3100.112	18.00 lf	31.00 /mh	558	15.00 /lf	284	-	-	-	-	-	-	842	1,065
	Liquid Curing Compounds	3390.170	62.83 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	8	9
	Grind/Patch Columns	3350.130	20.94 sf	31.00 /mh	10	0.05 /sf	1	-	-	-	-	-	-	11	15
	Rub Columns	3350.140	20.94 sf	31.00 /mh	19	0.12 /sf	3	-	-	-	-	-	-	22	30
	Dimension Lumber	3150.200	62.83 sf	31.00 /mh	0	0.50 /sf	31	-	-	-	-	-	-	31	31
	Bobcat Skid Steer (85hp)- track (L) with Post hole attachment	1900.131	0.50 mnth	-	-	-	-	-	-	4,000.00 /mnth	2,000	2,000.00 /mnth	1,000	3,000	3,040
	Influent Pump Station Monorail Columns 2ea		1.00 cy		890		852	/cy			2,000		1,100	4,842	5,238
	Concrete Concrete				73,057		126,552				2,000		9,362	210,971	240,234
	150 Influent Pump Station				73,057		126,552	/LS			2,000		9,362	210,971	240,234
	200 Aeration Basin														
	Concrete Concrete														
	0302- Aeration Basin Base Slab														
	5000 psi Concrete	3310.100	821.33 cy	-	-	165.00 /cy	145,006	-	-	-	-	-	-	145,006	145,006
	Slab Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	821.33 cy	31.00 /mh	13,622	-	-	-	-	-	-	31.26 /cy	27,472	41,094	46,543
	Formwork S.O.G. Edge Form > 1'	3100.120	884.00 sf	31.00 /mh	8,769	1.50 /sf	1,392	-	-	-	-	-	-	10,162	13,669
	Formwork S.O.G. Const Joints > 1'	3100.120	750.00 sf	31.00 /mh	10,695	1.50 /sf	1,181	-	-	-	-	-	-	11,876	16,154
	CJ Prep Slab	3350.170	750.00 sf	31.00 /mh	581	0.15 /sf	113	-	-	-	-	-	-	694	926
	Finegrade Below Concrete	3150.650	11,088.00 sf	31.00 /mh	6,875	-	-	-	-	-	-	-	-	6,875	9,624
	Finish- Hard Trowel	3350.110	11,088.00 sf	31.00 /mh	4,812	/sf		-	-	-	-	-	-	4,812	6,737
	Liquid Curing Compounds	3390.170	11,088.00 sf	31.00 /mh	687	0.06 /sf	665	-	-	-	-	-	-	1,353	1,628
	Blockouts in Concrete	3150.194	105.00 sf	31.00 /mh	1,139	2.00 /sf	210	-	-	-	-	-	-	1,349	1,805
	Waterstop 9" Flat	3510.610	375.00 lf	31.00 /mh	1,163	7.00 /lf	2,756	-	-	-	-	-	-	3,919	4,384
	Oil SOG Form	3100.310	1,634.00 sf	31.00 /mh	1	0.02 /sf	33	-	-	-	-	-	-	33	33
	Nails and Hardware	3150.200	884.00 sf	31.00 /mh	0	0.04 /sf	35	-	-	-	-	-	-	36	36
	Dimension Lumber	3150.200	884.00 sf	31.00 /mh	0	0.50 /sf	442	-	-	-	-	-	-	442	442
	Expansion Joint Neoprene Sheets 3/4in thick	3150.720	160.00 sf	31.00 /mh	1,240	6.00 /sf	1,008	-	-	-	-	-	-	2,248	2,744
	Expansion Joint Cap	3150.720	70.00 lf	31.00 /mh	22	0.35 /lf	26	-	-	-	-	-	-	47	56
	Expansion Joint Sealant	3150.720	70.00 lf	31.00 /mh	22	2.00 /lf	147	-	-	-	-	-	-	169	177
	Smooth Dowels 1" X 3' coated with cap	3210.106	70.00 ea	31.00 /mh	1,085	14.00 /ea	980	-	-	-	-	-	-	2,065	2,499
	Waterstop 6" Flat	3510.610	160.00 lf	31.00 /mh	496	5.00 /lf	840	-	-	-	-	-	-	1,336	1,534
	Waterstop 6" Protector Cap	3510.610	166.00 lf	31.00 /mh	515	20.00 /lf	3,486	-	-	-	-	-	-	4,001	4,206
	Epoxy Anchor 3/8 x 5in SS 316	5001.054	332.00 ea	31.00 /mh	515	8.00 /ea	2,656	-	-	-	-	-	-	3,171	3,376
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	332.00 lf	31.00 /mh	309	15.00 /tu be	213	-	-	-	-	-	-	522	645
	Rebar Formsavers # 9	3210.108	304.00 ea	31.00 /mh	4,712	51.00 /ea	15,504	-	-	-	-	-	-	20,216	22,101
	Rebar Formsavers #9 Bolt Caps	3210.108	304.00 ea	31.00 /mh	4,712	51.00 /ea	15,504	-	-	-	-	-	-	20,216	22,101
	Waterstop Fittings	3510.610	4.00 ea	31.00 /mh	248	55.00 /ea	231	-	-	-	-	-	-	479	578
	Aeration Basin Base Slab		821.33 cy		62,219		192,429	/cy					27,472	282,120	307,007
	0302- Aeration Stairway Bottom of Stair Pad														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302-	Aeration Stairway Bottom of Stair Pad														
	5000 psi Concrete	3310.100	4.00 cy	-	-	165.00 /cy	706	-	-	-	-	-	-	706	706
	Pump Place Slab on Grade	3310.230	4.00 cy	31.00 /mh	133	-	-	-	-	-	-	31.26 /cy	134	266	320
	Formwork S.O.G. Edge Form > 1'	3100.120	72.00 sf	31.00 /mh	714	1.50 /sf	113	-	-	-	-	-	-	828	1,113
	Finegrade Below Concrete	3150.650	72.00 sf	31.00 /mh	45	-	-	-	-	-	-	-	-	45	62
	Finish- Hard Trowel	3350.110	72.00 sf	31.00 /mh	31	/sf		-	-	-	-	-	-	31	44
	Liquid Curing Compounds	3390.170	72.00 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	9	11
	Oil SOG Form	3100.310	72.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	72.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	72.00 sf	31.00 /mh	0	0.50 /sf	36	-	-	-	-	-	-	36	36
	Aeration Stairway Bottom of Stair Pad		4.00 cy		927		864	/cy					134	1,925	2,296
0303-	Aeration Basin Exterior Walls and Future Wall Stubs														
	Pump Place Walls	3310.260	656.09 cy	31.00 /mh	15,234	-	-	-	-	-	-	31.26 /cy	21,945	37,179	43,272
	5000 psi Concrete	3310.100	656.09 cy	-	-	165.00 /cy	115,832	-	-	-	-	-	-	115,832	115,832
	Wall Placement Count	3310.360	10.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Gang Form System 16'->	3100.180	19,360.00 sf	31.00 /mh	78,021	2.50 /sf	50,820	-	-	-	-	-	-	128,841	160,049
	Wall Bulkhead Forms	3150.192	648.00 sf	31.00 /mh	9,240	1.50 /sf	1,021	-	-	-	-	-	-	10,261	13,957
	CJ Prep Walls	3350.170	1,288.32 sf	31.00 /mh	998	0.15 /sf	193	-	-	-	-	-	-	1,192	1,591
	Finish- Top of Wall	3350.110	805.20 sf	31.00 /mh	349	/sf		-	-	-	-	-	-	349	489
	Liquid Curing Walls	3390.170	20,165.20 sf	31.00 /mh	625	0.06 /sf	1,210	-	-	-	-	-	-	1,835	2,085
	Grind/Patch Walls	3350.130	19,360.00 sf	31.00 /mh	7,202	0.05 /sf	968	-	-	-	-	-	-	8,170	11,051
	Waterstop 6" Flat	3510.610	814.00 lf	31.00 /mh	2,523	5.00 /lf	4,274	-	-	-	-	-	-	6,797	7,806
	Chamfer 3/4"	3150.625	968.00 lf	31.00 /mh	1,500	0.20 /lf	203	-	-	-	-	-	-	1,704	2,304
	Rub Walls	3350.140	9,680.00 sf	31.00 /mh	12,003	0.15 /sf	1,452	-	-	-	-	-	-	13,455	18,256
	Oil Wall Forms	3100.310	19,360.00 sf	31.00 /mh	6	0.02 /sf	387	-	-	-	-	-	-	393	396
	Nails and Hardware	3150.200	19,360.00 sf	31.00 /mh	6	0.04 /sf	774	-	-	-	-	-	-	780	783
	Form Ties 22"	3150.632	4,840.00 ea	31.00 /mh	2	2.80 /ea	13,552	-	-	-	-	-	-	13,554	13,554
	Dimension Lumber	3150.200	19,360.00 sf	31.00 /mh	6	0.50 /sf	9,680	-	-	-	-	-	-	9,686	9,688
	Rebar Templates	3200.980	440.00 lf	31.00 /mh	682	0.50 /lf	220	-	-	-	-	-	-	902	1,175
	Expansion Joint Cork Sheets	3150.720	88.00 sf	31.00 /mh	273	6.00 /sf	554	-	-	-	-	-	-	827	936
	Expansion Joint Cap	3150.720	88.00 lf	31.00 /mh	273	0.35 /lf	32	-	-	-	-	-	-	305	414
	Expansion Joint Sealant	3150.720	88.00 lf	31.00 /mh	273	2.00 /lf	185	-	-	-	-	-	-	458	567
	Smooth Dowels 1" X 3' coated	3210.106	88.00 ea	31.00 /mh	1,364	14.00 /ea	1,232	-	-	-	-	-	-	2,596	3,142
	Rebar Formsavers # 8	3210.108	96.00 ea	31.00 /mh	1,488	47.00 /ea	4,512	-	-	-	-	-	-	6,000	6,595
	Rebar Formsavers # 6	3210.108	144.00 ea	31.00 /mh	2,232	30.00 /ea	4,320	-	-	-	-	-	-	6,552	7,445
	Waterstop 6" Cap for future	3510.610	120.00 lf	31.00 /mh	372	20.00 /lf	2,520	-	-	-	-	-	-	2,892	3,041
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	240.00 lf	31.00 /mh	223	15.00 /tube	154	-	-	-	-	-	-	377	467
	PS Epoxy Anchor 3/8 x 5in SS	15060.112	240.00 ea	31.00 /mh	372	14.00 /ea	3,360	-	-	-	-	-	-	3,732	3,881
	Rebar Formsavers # 8 caps for future	3210.108	96.00 ea	31.00 /mh	1,488	47.00 /ea	4,512	-	-	-	-	-	-	6,000	6,595
	Rebar Formsavers #6 caps for future	3210.108	144.00 ea	31.00 /mh	2,232	30.00 /ea	4,320	-	-	-	-	-	-	6,552	7,445
	Bondng agent and CJ prep tie holes	3350.130	1,615.00 ea	31.00 /mh	7,510	2.00 /ea	3,230	-	-	-	-	-	-	10,740	13,744
	Grout Slurry bottom of walls	3150.200	290.00 cf	31.00 /mh	2,248	15.00 /cf	4,350	-	-	-	-	-	-	6,598	7,497
	Waterstop Fittings	3510.610	22.00 ea	31.00 /mh	1,364	55.00 /ea	1,271	-	-	-	-	-	-	2,635	3,180
	Aeration Basin Exterior Walls and Future Wall Stubs		656.09 cy		150,109		235,139	/cy					21,945	407,193	467,237
0303-	Aeration Basin Interior Walls														
	Pump Place Walls	3310.260	543.40 cy	31.00 /mh	12,617	-	-	-	-	-	-	31.26 /cy	18,176	30,793	35,840
	5000 psi Concrete	3310.100	543.40 cy	-	-	165.00 /cy	95,937	-	-	-	-	-	-	95,937	95,937
	Gang Form System 16'->	3100.180	25,080.00 sf	31.00 /mh	101,072	2.50 /sf	65,835	-	-	-	-	-	-	166,907	207,336
	Wall Bulkhead Forms	3150.192	437.58 sf	31.00 /mh	6,240	1.50 /sf	689	-	-	-	-	-	-	6,929	9,425
	CJ Prep Walls	3350.170	1,104.48 sf	31.00 /mh	856	0.15 /sf	166	-	-	-	-	-	-	1,022	1,364
	Finish- Top of Wall	3350.110	666.90 sf	31.00 /mh	289	/sf		-	-	-	-	-	-	289	405
	Liquid Curing Walls	3390.170	25,746.90 sf	31.00 /mh	798	0.06 /sf	1,545	-	-	-	-	-	-	2,343	2,662
	Grind/Patch Walls	3350.130	25,080.00 sf	31.00 /mh	9,330	0.05 /sf	1,254	-	-	-	-	-	-	10,584	14,316
	Blockouts in Concrete	3150.194	206.00 sf	31.00 /mh	2,235	2.00 /sf	412	-	-	-	-	-	-	2,647	3,541
	Waterstop 6" Flat	3510.610	954.00 lf	31.00 /mh	2,957	5.00 /lf	5,009	-	-	-	-	-	-	7,966	9,149
	Chamfer 3/4"	3150.625	1,140.00 lf	31.00 /mh	1,767	0.20 /lf	239	-	-	-	-	-	-	2,006	2,713
	Rub Walls	3350.140	11,400.00 sf	31.00 /mh	14,136	0.15 /sf	1,710	-	-	-	-	-	-	15,846	21,500
	Oil Wall Forms	3100.310	25,080.00 sf	31.00 /mh	8	0.02 /sf	502	-	-	-	-	-	-	509	512
	Nails and Hardware	3150.200	25,080.00 sf	31.00 /mh	8	0.04 /sf	1,003	-	-	-	-	-	-	1,011	1,014
	Form Ties 14"	3150.632	6,270.00 ea	31.00 /mh	2	2.40 /ea	15,048	-	-	-	-	-	-	15,050	15,051
	Dimension Lumber	3150.200	25,080.00 sf	31.00 /mh	8	0.50 /sf	12,540	-	-	-	-	-	-	12,548	12,551
	Rebar Templates	3200.980	570.00 lf	31.00 /mh	884	0.50 /lf	285	-	-	-	-	-	-	1,169	1,522
	Expansion Joint 3/4" Neoprene	3150.720	60.00 sf	31.00 /mh	186	6.00 /sf	378	-	-	-	-	-	-	564	638
	Expansion Joint Cap	3150.720	88.00 lf	31.00 /mh	273	0.35 /lf	32	-	-	-	-	-	-	305	414
	Expansion Joint Sealant	3150.720	88.00 lf	31.00 /mh	273	2.00 /lf	185	-	-	-	-	-	-	458	567
	Smooth Dowels 1" X 3' coated	3210.106	88.00 ea	31.00 /mh	1,364	14.00 /ea	1,232	-	-	-	-	-	-	2,596	3,142
	Waterstop 9" Flat	3510.610	88.00 lf	31.00 /mh	246	7.00 /lf	647	-	-	-	-	-	-	892	991
	Rebar Formsavers # 5	3210.108	80.00 ea	31.00 /mh	818	27.00 /ea	2,160	-	-	-	-	-	-	2,978	3,306
	Bonding agent and cj prep tie holes	3350.130	2,083.00 ea	31.00 /mh	9,686	2.00 /ea	4,166	-	-	-	-	-	-	13,852	17,726
	Grout Slurry bottom of walls	3150.200	220.00 cf	31.00 /mh	1,705	15.00 /cf	3,300	-	-	-	-	-	-	5,005	5,687
	Waterstop Fittings	3510.610	24.00 ea	31.00 /mh	1,488	55.00 /ea	1,386	-	-	-	-	-	-	2,874	3,469

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Aeration Basin Interior Walls		543.40 cy		169,246		215,660	/cy					18,176	403,081	470,779
0303-	Aeration Effluent Box Walls														
	Pump Place Walls	3310.260	6.67 cy	31.00 /mh	332	-	-	-	-	-	-	31.26 /cy	223	555	687
	5000 psi Concrete	3310.100	6.67 cy	-	-	165.00 /cy	1,177	-	-	-	-	-	-	1,177	1,177
	Rented Form System 4-8'	3100.180	360.00 sf	31.00 /mh	2,232	1.50 /sf	567	-	-	-	-	-	-	2,799	3,692
	Wall Bulkhead Forms	3150.192	12.00 sf	31.00 /mh	171	1.50 /sf	19	-	-	-	-	-	-	190	258
	CJ Prep Walls	3350.170	42.00 sf	31.00 /mh	33	0.15 /sf	6	-	-	-	-	-	-	39	52
	Finish- Top of Wall	3350.110	30.00 sf	31.00 /mh	13	/sf		-	-	-	-	-	-	13	18
	Liquid Curing Walls	3390.170	390.00 sf	31.00 /mh	12	0.06 /sf	23	-	-	-	-	-	-	35	40
	Grind/Patch Walls	3350.130	360.00 sf	31.00 /mh	134	0.05 /sf	18	-	-	-	-	-	-	152	205
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Waterstop 6" Flat	3510.610	45.00 lf	31.00 /mh	140	5.00 /lf	236	-	-	-	-	-	-	376	432
	Keyway 4"	3150.620	12.00 lf	31.00 /mh	19	1.00 /lf	13	-	-	-	-	-	-	31	39
	Rub Walls	3350.140	180.00 sf	31.00 /mh	223	0.15 /sf	27	-	-	-	-	-	-	250	339
	Oil Wall Forms	3100.310	360.00 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	7	7
	Nails and Hardware	3150.200	360.00 sf	31.00 /mh	0	0.04 /sf	14	-	-	-	-	-	-	15	15
	Form Ties 12"	3150.632	90.00 ea	31.00 /mh	0	2.35 /ea	212	-	-	-	-	-	-	212	212
	Dimension Lumber	3150.200	360.00 sf	31.00 /mh	0	0.50 /sf	180	-	-	-	-	-	-	180	180
	Rebar Templates	3200.980	30.00 lf	31.00 /mh	47	0.50 /lf	15	-	-	-	-	-	-	62	80
	Aeration Effluent Box Walls		6.67 cy		4,049		2,643	/cy					223	6,915	8,534
0304-	Effluent Box Elevated Deck Effluent Box														
	5000 psi Concrete	3310.100	5.11 cy	-	-	165.00 /cy	902	-	-	-	-	-	-	902	902
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Suspended Slab	3310.240	5.11 cy	31.00 /mh	254	-	-	-	-	-	-	-	-	254	356
	Shore Suspended Slab 15-up	3100.124	138.00 sf	31.00 /mh	1,711	4.25 /sf	616	-	-	-	-	-	-	2,327	3,012
	Slab Edge Form < 1'	3100.124	29.00 sf	31.00 /mh	450	2.00 /sf	61	-	-	-	-	-	-	510	690
	Finish- Hard Trowel	3350.110	138.00 sf	31.00 /mh	60	/sf		-	-	-	-	-	-	60	84
	Liquid Curing Compounds	3390.170	138.00 sf	31.00 /mh	9	0.06 /sf	8	-	-	-	-	-	-	17	20
	Grind and Patch Deck Bottom	3350.130	138.00 sf	31.00 /mh	51	0.05 /sf	7	-	-	-	-	-	-	58	79
	Waterstop Adeka or Swellstop	3510.610	60.00 lf	31.00 /mh	167	8.50 /lf	536	-	-	-	-	-	-	703	770
	Keyway 4"	3150.620	30.00 lf	31.00 /mh	233	1.00 /lf	32	-	-	-	-	-	-	264	357
	Oil Suspended Slab Frm	3100.310	138.00 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3
	Nails and Hardware	3150.200	138.00 sf	31.00 /mh	0	0.04 /sf	6	-	-	-	-	-	-	6	6
	Effluent Box Elevated Deck Effluent Box		5.11 cy		2,935		2,170	/cy						5,104	6,278
0304-	Aeration Elevated Walkways														
	5000 psi Concrete	3310.100	69.48 cy	-	-	165.00 /cy	12,267	-	-	-	-	-	-	12,267	12,267
	Pump Place Suspended Slab	3310.240	69.48 cy	31.00 /mh	2,305	-	-	-	-	-	-	31.26 /cy	2,324	4,629	5,551
	Shore Suspended Slab 15-up	3100.124	2,800.00 sf	31.00 /mh	34,720	4.25 /sf	12,495	-	-	-	-	-	-	47,215	61,103
	Slab Edge Form < 1'	3100.124	469.00 sf	31.00 /mh	7,270	2.00 /sf	985	-	-	-	-	-	-	8,254	11,162
	Suspended Slab Const Joint	3100.124	16.08 sf	31.00 /mh	174	1.50 /sf	24	-	-	-	-	-	-	199	268
	CJ Prep Elevated Slab CJ	3350.170	16.08 sf	31.00 /mh	12	0.20 /sf	3	-	-	-	-	-	-	16	21
	Finish- Hard Trowel	3350.110	2,800.00 sf	31.00 /mh	1,215	/sf		-	-	-	-	-	-	1,215	1,701
	Liquid Curing Compounds	3390.170	2,800.00 sf	31.00 /mh	174	0.06 /sf	168	-	-	-	-	-	-	342	411
	Grind and Patch Deck Bottom	3350.130	2,800.00 sf	31.00 /mh	1,042	0.05 /sf	140	-	-	-	-	-	-	1,182	1,598
	Blockouts in Concrete	3150.194	16.00 sf	31.00 /mh	174	2.00 /sf	32	-	-	-	-	-	-	206	275
	Chamfer 3/4"	3150.625	1,050.00 lf	31.00 /mh	1,628	0.20 /lf	221	-	-	-	-	-	-	1,848	2,499
	Oil Suspended Slab Frm	3100.310	2,800.00 sf	31.00 /mh	1	0.02 /sf	56	-	-	-	-	-	-	57	57
	Nails and Hardware	3150.200	2,800.00 sf	31.00 /mh	1	0.04 /sf	112	-	-	-	-	-	-	113	113
	Expansion Joint 3/4" neoprene	3150.720	8.00 sf	31.00 /mh	25	6.00 /sf	50	-	-	-	-	-	-	75	85
	Smooth Dowels 1" coated	3210.106	8.00 ea	31.00 /mh	124	14.00 /ea	112	-	-	-	-	-	-	236	286
	Aeration Elevated Walkways		69.48 cy		48,863		26,665	/cy					2,324	77,852	97,398
	Concrete Concrete				438,348		675,569						70,274	1,184,190	1,359,529
	200 Aeration Basin				438,348		675,569	/LS					70,274	1,184,190	1,359,529
250	Secondary Clarifier Splitter Box														
	Concrete Concrete														
0302-	Clarifier Splitter Structure Base Slab														
	5000 psi Concrete	3310.100	15.44 cy	-	-	165.00 /cy	2,726	-	-	-	-	-	-	2,726	2,726
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	15.44 cy	31.00 /mh	512	-	-	-	-	-	-	31.26 /cy	516	1,028	1,233
	Formwork S.O.G. Edge Form > 1'	3100.120	100.02 sf	31.00 /mh	1,240	1.50 /sf	158	-	-	-	-	-	-	1,398	1,894
	Finegrade Below Concrete	3150.650	277.89 sf	31.00 /mh	172	-	-	-	-	-	-	-	-	172	241
	Finish- Hard Trowel	3350.110	277.89 sf	31.00 /mh	121	/sf		-	-	-	-	-	-	121	169
	Waterstop 6" Flat	3510.610	128.00 lf	31.00 /mh	397	5.00 /lf	672	-	-	-	-	-	-	1,069	1,228
	Oil SOG Form	3100.310	100.02 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	100.02 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	100.02 sf	31.00 /mh	0	0.50 /sf	50	-	-	-	-	-	-	50	50
	Waterstop Fittings	3510.610	4.00 ea	31.00 /mh	248	55.00 /ea	231	-	-	-	-	-	-	479	578
	Clarifier Splitter Structure Base Slab		15.44 cy		2,690		3,842	/cy					516	7,049	8,125
0303-	Clarifier Splitter Box Walls														
	Pump Place Walls	3310.260	49.41 cy	31.00 /mh	1,311	-	-	-	-	-	-	31.26 /cy	1,653	2,964	3,488
	5000 psi Concrete	3310.100	49.41 cy	-	-	165.00 /cy	8,723	-	-	-	-	-	-	8,723	8,723

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- Clarifier Splitter Box Walls														
	Wall Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Rented Form System 8-12'	3100.180	2,668.00 sf	31.00 /mh	14,887	1.50 /sf	4,202	-	-	-	-	-	-	19,090	25,045
	CJ Prep Walls	3350.170	116.00 sf	31.00 /mh	90	0.15 /sf	17	-	-	-	-	-	-	107	143
	Finish- Top of Wall	3350.110	116.00 sf	31.00 /mh	50	/sf		-	-	-	-	-	-	50	70
	Liquid Curing Walls	3390.170	2,784.00 sf	31.00 /mh	86	0.06 /sf	167	-	-	-	-	-	-	253	288
	Grind/Patch Walls	3350.130	2,668.00 sf	31.00 /mh	993	0.05 /sf	133	-	-	-	-	-	-	1,126	1,523
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Chamfer 3/4"	3150.625	80.00 lf	31.00 /mh	124	0.20 /lf	17	-	-	-	-	-	-	141	190
	Rub Walls	3350.140	696.00 sf	31.00 /mh	863	0.15 /sf	104	-	-	-	-	-	-	967	1,313
	Oil Wall Forms	3100.310	2,668.00 sf	31.00 /mh	1	0.02 /sf	53	-	-	-	-	-	-	54	55
	Nails and Hardware	3150.200	2,668.00 sf	31.00 /mh	1	0.04 /sf	107	-	-	-	-	-	-	108	108
	Form Ties 12"	3150.632	667.00 ea	31.00 /mh	0	2.35 /ea	1,567	-	-	-	-	-	-	1,568	1,568
	Dimension Lumber	3150.200	2,668.00 sf	31.00 /mh	1	0.50 /sf	1,334	-	-	-	-	-	-	1,335	1,335
	Rebar Templates	3200.980	116.00 lf	31.00 /mh	180	0.50 /lf	58	-	-	-	-	-	-	238	310
	Waterstop Fitting	3510.610	8.00 ea	31.00 /mh	496	55.00 /ea	462	-	-	-	-	-	-	958	1,156
	Grout Slurry in bottom of walls	3150.200	50.00 cf	31.00 /mh	388	15.00 /cf	750	-	-	-	-	-	-	1,138	1,292
	Clarifier Splitter Box Walls		49.41 cy		20,165		17,823	/cy					1,653	39,641	47,707
	Concrete Concrete				22,855		21,666						2,169	46,690	55,832
	250 Secondary Clarifier Splitter Box				22,855		21,666	/LS					2,169	46,690	55,832
	300 Secondary Clarifiers 5 and 6														
	Concrete Concrete														
	0302- Effluent Box Bottom Slab Clarifer 5 and 6														
	5000 psi Concrete	3310.100	4.74 cy	-	-	165.00 /cy	837	-	-	-	-	-	-	837	837
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	4.74 cy	31.00 /mh	236	-	-	-	-	-	-	31.26 /cy	159	394	489
	Formwork S.O.G. Edge Form < 1'	3100.120	64.00 sf	31.00 /mh	694	1.50 /sf	101	-	-	-	-	-	-	795	1,073
	Finegrade Below Concrete	3150.650	128.00 sf	31.00 /mh	79	-	-	-	-	-	-	-	-	79	111
	Finish- Hard Trowel	3350.110	128.00 sf	31.00 /mh	56	/sf		-	-	-	-	-	-	56	78
	Liquid Curing Compounds	3390.170	128.00 sf	31.00 /mh	8	0.06 /sf	8	-	-	-	-	-	-	16	19
	Waterstop 6" Flat	3510.610	24.00 lf	31.00 /mh	74	5.00 /lf	126	-	-	-	-	-	-	200	230
	Oil SOG Form	3100.310	64.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	64.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	64.00 sf	31.00 /mh	0	0.50 /sf	32	-	-	-	-	-	-	32	32
	Waterstop Fitting	3510.610	4.00 ea	31.00 /mh	248	55.00 /ea	231	-	-	-	-	-	-	479	578
	Effluent Box Bottom Slab Clarifer 5 and 6		4.74 cy		1,396		1,338	/cy					159	2,893	3,451
	0302-B Clarifier 5 and 6 grout topping at trough outside														
	5000 psi Concrete	3310.100	6.67 cy	-	-	165.00 /cy	1,177	-	-	-	-	-	-	1,177	1,177
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	6.67 cy	31.00 /mh	885	-	-	-	-	-	-	31.26 /cy	223	1,108	1,461
	Finish- Hard Trowel	3350.110	300.00 sf	31.00 /mh	130	/sf		-	-	-	-	-	-	130	182
	Liquid Curing Compounds	3390.170	300.00 sf	31.00 /mh	19	0.06 /sf	18	-	-	-	-	-	-	37	44
	Oil SOG Form	3100.310	362.40 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	7	7
	Nails and Hardware	3150.200	362.40 sf	31.00 /mh	0	0.04 /sf	15	-	-	-	-	-	-	15	15
	Dimension Lumber	3150.200	362.40 sf	31.00 /mh	0	0.50 /sf	181	-	-	-	-	-	-	181	181
	CJ Prep Slab	3350.170	300.00 sf	31.00 /mh	233	0.15 /sf	45	-	-	-	-	-	-	278	371
	Fibber Reinforcing grout topping	3310.110	7.00 cy	-	-	25.00 /cy	187	-	-	-	-	-	-	187	187
	Clarifier 5 and 6 grout topping at trough outside		6.67 cy		1,266		1,630	/cy					223	3,120	3,626
	0302-B Grout Fill at Scum Manhole														
	5000 psi Concrete	3310.100	3.00 cy	-	-	165.00 /cy	530	-	-	-	-	-	-	530	530
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	3.00 cy	31.00 /mh	149	-	-	-	-	-	-	31.26 /cy	100	250	309
	Formwork S.O.G. Edge Form > 1'	3100.120	48.00 sf	31.00 /mh	372	1.50 /sf	76	-	-	-	-	-	-	448	596
	Finish- Hard Trowel	3350.110	36.00 sf	31.00 /mh	16	/sf		-	-	-	-	-	-	16	22
	Liquid Curing Compounds	3390.170	36.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Oil SOG Form	3100.310	48.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	48.00 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Dimension Lumber	3150.200	48.00 sf	31.00 /mh	0	0.50 /sf	24	-	-	-	-	-	-	24	24
	CJ Prep Slab	3350.170	36.00 sf	31.00 /mh	28	0.15 /sf	5	-	-	-	-	-	-	33	44
	Fiber Reinforcing for grout fill	3310.110	3.00 cy	-	-	25.00 /cy	80	-	-	-	-	-	-	80	80
	Grout Fill at Scum Manhole		3.00 cy		567		720	/cy					100	1,387	1,614
	0303- Clarifier 5 and 6 Effluent Box Walls														
	Pump Place Walls	3310.260	16.23 cy	31.00 /mh	1,077	-	-	-	-	-	-	31.26 /cy	543	1,619	2,050
	5000 psi Concrete	3310.100	16.23 cy	-	-	165.00 /cy	2,865	-	-	-	-	-	-	2,865	2,865
	Wall Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Rented Form System 12-16'	3100.180	876.24 sf	31.00 /mh	7,334	1.50 /sf	1,380	-	-	-	-	-	-	8,714	11,648
	CJ Prep Walls	3350.170	36.00 sf	31.00 /mh	28	0.15 /sf	5	-	-	-	-	-	-	33	44
	Finish- Top of Wall	3350.110	36.00 sf	31.00 /mh	16	/sf		-	-	-	-	-	-	16	22
	Liquid Curing Walls	3390.170	912.24 sf	31.00 /mh	28	0.06 /sf	55	-	-	-	-	-	-	83	94
	Grind/Patch Walls	3350.130	876.24 sf	31.00 /mh	326	0.05 /sf	44	-	-	-	-	-	-	370	500
	Waterstop Adeka or Swellstop	3510.610	48.00 lf	31.00 /mh	149	8.50 /lf	428	-	-	-	-	-	-	577	637

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0303-	Clarifier 5 and 6 Effluent Box Walls														
	Chamfer 3/4"	3150.625	80.00 lf	31.00 /mh	124	0.20 /lf	17	-	-	-	-	-	-	141	190
	Rub Walls	3350.140	360.00 sf	31.00 /mh	446	0.15 /sf	54	-	-	-	-	-	-	500	679
	Oil Wall Forms	3100.310	876.24 sf	31.00 /mh	0	0.02 /sf	18	-	-	-	-	-	-	18	18
	Nails and Hardware	3150.200	876.24 sf	31.00 /mh	0	0.04 /sf	35	-	-	-	-	-	-	35	35
	Form Ties 12"	3150.632	219.06 ea	31.00 /mh	0	2.35 /ea	515	-	-	-	-	-	-	515	515
	Dimension Lumber	3150.200	876.24 sf	31.00 /mh	0	0.50 /sf	438	-	-	-	-	-	-	438	438
	Rebar Templates	3200.980	36.00 lf	31.00 /mh	56	0.50 /lf	18	-	-	-	-	-	-	74	96
	Grout Slurry bottom of walls	3150.200	17.00 cf	31.00 /mh	132	15.00 /cf	255	-	-	-	-	-	-	387	439
	Clarifier 5 and 6 Effluent Box Walls		16.23 cy		9,716		6,127	/cy					543	16,385	20,272
0304-	Clarifier 5 and 6 Trough Concrete Susp Slab														
	5000 psi Concrete	3310.100	44.44 cy	-	-	165.00 /cy	7,847	-	-	-	-	-	-	7,847	7,847
	Slab Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Suspended Slab	3310.240	44.44 cy	31.00 /mh	2,211	-	-	-	-	-	-	31.26 /cy	1,487	3,698	4,582
	Shore Suspended Slab 15-up	3100.124	1,200.00 sf	31.00 /mh	14,880	4.25 /sf	5,355	-	-	-	-	-	-	20,235	26,187
	Slab Edge Form < 1'	3100.124	300.00 sf	31.00 /mh	4,650	2.00 /sf	630	-	-	-	-	-	-	5,280	7,140
	Suspended Slab Const Joint	3100.124	24.00 sf	31.00 /mh	260	1.50 /sf	36	-	-	-	-	-	-	296	401
	CJ Prep Elevated Slab CJ	3350.170	24.00 sf	31.00 /mh	19	0.20 /sf	5	-	-	-	-	-	-	23	31
	Finish- Hard Trowel	3350.110	1,200.00 sf	31.00 /mh	521	/sf	-	-	-	-	-	-	-	521	729
	Liquid Curing Compounds	3390.170	1,200.00 sf	31.00 /mh	74	0.06 /sf	72	-	-	-	-	-	-	146	176
	Grind and Patch Deck Bottom	3350.130	1,200.00 sf	31.00 /mh	446	0.05 /sf	60	-	-	-	-	-	-	506	685
	Waterstop 6" Flat	3510.610	324.00 lf	31.00 /mh	1,004	5.00 /lf	1,701	-	-	-	-	-	-	2,705	3,107
	Chamfer 3/4"	3150.625	300.00 lf	31.00 /mh	465	0.20 /lf	63	-	-	-	-	-	-	528	714
	Oil Suspended Slab Frm	3100.310	1,200.00 sf	31.00 /mh	0	0.02 /sf	24	-	-	-	-	-	-	24	25
	Nails and Hardware	3150.200	1,200.00 sf	31.00 /mh	0	0.04 /sf	48	-	-	-	-	-	-	48	49
	Clarifier 5 and 6 Trough Concrete Susp Slab		44.44 cy		24,532		15,840	/cy					1,487	41,859	51,672
0308-	Clarifier 5 and 6 Center Column Concrete														
	5000 psi Concrete	3310.100	26.00 cy	-	-	165.00 /cy	4,590	-	-	-	-	-	-	4,590	4,590
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	26.00 cy	31.00 /mh	1,294	-	-	-	-	-	-	31.26 /cy	870	2,163	2,681
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	301.59 sf	31.00 /mh	4,675	1.50 /sf	475	-	-	-	-	-	-	5,150	7,020
	Finegrade Below Concrete	3150.650	100.53 sf	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Finish- Hard Trowel	3350.110	100.53 sf	31.00 /mh	44	/sf	-	-	-	-	-	-	-	44	61
	Liquid Curing Compounds	3390.170	100.53 sf	31.00 /mh	6	0.06 /sf	6	-	-	-	-	-	-	12	15
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Waterstop 6" Flat	3510.610	64.00 lf	31.00 /mh	198	5.00 /lf	336	-	-	-	-	-	-	534	614
	Oil SOG Form	3100.310	301.59 sf	31.00 /mh	0	0.02 /sf	6	-	-	-	-	-	-	6	6
	Nails and Hardware	3150.200	301.59 sf	31.00 /mh	0	0.04 /sf	12	-	-	-	-	-	-	12	12
	Dimension Lumber	3150.200	301.59 sf	31.00 /mh	0	0.50 /sf	151	-	-	-	-	-	-	151	151
	Flow Fill around center column	3310.105	100.00 cy	31.00 /mh	3,100	120.00 /cy	12,600	-	-	-	-	-	-	15,700	16,940
	Clarifier 5 and 6 Center Column Concrete		26.00 cy		10,074		18,304	/cy					870	29,247	33,277
0308-	Clarifier 5 and 6 Base Slab Concrete														
	5000 psi Concrete	3310.100	339.29 cy	-	-	165.00 /cy	59,902	-	-	-	-	-	-	59,902	59,902
	Slab Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	339.29 cy	31.00 /mh	8,441	-	-	-	-	-	-	31.26 /cy	11,349	19,789	23,166
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	678.58 sf	31.00 /mh	7,363	1.50 /sf	1,069	-	-	-	-	-	-	8,431	11,376
	Formwork S.O.G. Const Joints > 1'	3100.120	432.00 sf	31.00 /mh	6,160	1.50 /sf	680	-	-	-	-	-	-	6,841	9,305
	CJ Prep Slab	3350.170	432.00 sf	31.00 /mh	335	0.15 /sf	65	-	-	-	-	-	-	400	534
	Finegrade Below Concrete	3150.650	4,580.44 sf	31.00 /mh	2,840	-	-	-	-	-	-	-	-	2,840	3,976
	Finish- Hard Trowel	3350.110	4,580.44 sf	31.00 /mh	1,988	/sf	-	-	-	-	-	-	-	1,988	2,783
	Liquid Curing Compounds	3390.170	4,580.44 sf	31.00 /mh	284	0.06 /sf	275	-	-	-	-	-	-	559	672
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Waterstop 6" Flat	3510.610	516.00 lf	31.00 /mh	1,600	5.00 /lf	2,709	-	-	-	-	-	-	4,309	4,948
	Oil SOG Form	3100.310	678.58 sf	31.00 /mh	0	0.02 /sf	14	-	-	-	-	-	-	14	14
	Nails and Hardware	3150.200	678.58 sf	31.00 /mh	0	0.04 /sf	27	-	-	-	-	-	-	27	27
	Dimension Lumber	3150.200	678.58 sf	31.00 /mh	0	0.50 /sf	339	-	-	-	-	-	-	340	340
	Waterstop Fittings	3510.610	8.00 ea	31.00 /mh	496	55.00 /ea	462	-	-	-	-	-	-	958	1,156
	Clarifier 5 and 6 Base Slab Concrete		339.29 cy		30,201		65,670	/cy					11,349	107,219	119,300
0308-	Clarifier Grout Topping														
	5500 psi Concrete	3310.100	36.93 cy	-	-	195.00 /cy	7,706	-	-	-	-	-	-	7,706	7,706
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	36.93 cy	31.00 /mh	1,837	-	-	-	-	-	-	31.26 /cy	1,235	3,073	3,808
	CJ Prep Slab	3350.170	3,323.81 sf	31.00 /mh	5,152	0.25 /sf	831	-	-	-	-	-	-	5,983	8,044
	Finish- Hard Trowel	3350.110	3,323.81 sf	31.00 /mh	1,443	/sf	-	-	-	-	-	-	-	1,443	2,020
	Water Cure	3390.170	3,323.81 sf	31.00 /mh	206	0.06 /sf	199	-	-	-	-	-	-	406	488
	Blockouts in Concrete	3150.194	32.00 sf	31.00 /mh	347	2.00 /sf	64	-	-	-	-	-	-	411	550
	Fiber in topping	3310.110	37.00 cy	-	-	25.00 /cy	990	-	-	-	-	-	-	990	990
	Clarifier Grout Topping		36.93 cy		8,985		9,790	/cy					1,235	20,010	23,604
0309-	Clarifier 5 and 6 Wall concrete														
	Pump Place Walls	3310.260	290.94 cy	31.00 /mh	7,720	-	-	-	-	-	-	31.26 /cy	9,731	17,451	20,540
	5000 psi Concrete	3310.100	290.94 cy	-	-	165.00 /cy	51,365	-	-	-	-	-	-	51,365	51,365
	Wall Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0309- Clarifier 5 and 6 Wall concrete														
	Radius Gang Forms 16- >	3100.182	11,812.39 sf	31.00 /mh	47,604	4.25 /sf	52,713	-	-	-	-	-	-	100,317	119,358
	Wall Bulkhead Forms	3150.192	212.80 sf	31.00 /mh	3,035	1.50 /sf	335	-	-	-	-	-	-	3,370	4,584
	CJ Prep Walls	3350.170	605.56 sf	31.00 /mh	469	0.15 /sf	91	-	-	-	-	-	-	560	748
	Finish- Top of Wall	3350.110	392.76 sf	31.00 /mh	170	/sf		-	-	-	-	-	-	170	239
	Liquid Curing Walls	3390.170	12,205.15 sf	31.00 /mh	378	0.06 /sf	732	-	-	-	-	-	-	1,111	1,262
	Grind/Patch Walls	3350.130	11,812.39 sf	31.00 /mh	4,394	0.05 /sf	591	-	-	-	-	-	-	4,985	6,743
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Waterstop 6" Flat	3510.610	160.00 lf	31.00 /mh	496	5.00 /lf	840	-	-	-	-	-	-	1,336	1,534
	Chamfer 3/4"	3150.625	1,200.00 lf	31.00 /mh	1,860	0.20 /lf	252	-	-	-	-	-	-	2,112	2,856
	Oil Wall Forms	3100.310	11,812.39 sf	31.00 /mh	4	0.02 /sf	236	-	-	-	-	-	-	240	241
	Nails and Hardware	3150.200	11,812.39 sf	31.00 /mh	4	0.04 /sf	473	-	-	-	-	-	-	476	478
	Form Ties 16"	3150.632	2,953.10 ea	31.00 /mh	1	2.50 /ea	7,383	-	-	-	-	-	-	7,384	7,384
	Dimension Lumber	3150.200	11,812.39 sf	31.00 /mh	4	0.50 /sf	5,906	-	-	-	-	-	-	5,910	5,911
	Rebar Formsavers # 6	3210.108	744.00 ea	31.00 /mh	11,532	30.00 /ea	22,320	-	-	-	-	-	-	33,852	38,465
	Waterstop Adeka or Swellstop	3510.610	400.00 lf	31.00 /mh	1,240	8.50 /lf	3,570	-	-	-	-	-	-	4,810	5,306
	Keyway 12"	3150.620	400.00 lf	31.00 /mh	3,100	4.00 /lf	1,680	-	-	-	-	-	-	4,780	6,020
	Bonding agent and CJ prep tie holes	3350.130	983.00 ea	31.00 /mh	4,571	2.00 /ea	1,966	-	-	-	-	-	-	6,537	8,365
	Grout Slurry bottom of walls	3150.200	140.00 cf	31.00 /mh	1,085	15.00 /cf	2,100	-	-	-	-	-	-	3,185	3,619
	Waterstop Fittings	3510.610	8.00 ea	31.00 /mh	496	55.00 /ea	462	-	-	-	-	-	-	958	1,156
	Clarifier 5 and 6 Wall concrete		290.94 cy		88,857		153,142	/cy					9,731	251,730	287,273
	0309- Clarifer 5 and 6 weir wall														
	Pump Place Walls	3310.260	17.00 cy	31.00 /mh	1,691	-	-	-	-	-	-	31.26 /cy	569	2,260	2,936
	5000 psi Concrete	3310.100	17.00 cy	-	-	165.00 /cy	3,001	-	-	-	-	-	-	3,001	3,001
	Wall Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Rented Form System 0-4'	3100.180	1,105.84 sf	31.00 /mh	10,284	1.50 /sf	1,742	-	-	-	-	-	-	12,026	16,140
	Wall Bulkhead Forms	3150.192	13.28 sf	31.00 /mh	189	1.50 /sf	21	-	-	-	-	-	-	210	286
	CJ Prep Walls	3350.170	242.74 sf	31.00 /mh	188	0.15 /sf	36	-	-	-	-	-	-	225	300
	Finish- Top of Wall	3350.110	229.46 sf	31.00 /mh	100	/sf		-	-	-	-	-	-	100	139
	Liquid Curing Walls	3390.170	1,335.30 sf	31.00 /mh	41	0.06 /sf	80	-	-	-	-	-	-	122	138
	Grind/Patch Walls	3350.130	1,105.84 sf	31.00 /mh	411	0.05 /sf	55	-	-	-	-	-	-	467	631
	Waterstop 6" Flat	3510.610	16.00 lf	31.00 /mh	50	5.00 /lf	84	-	-	-	-	-	-	134	153
	Chamfer 4"	3150.625	300.00 lf	31.00 /mh	2,325	0.20 /lf	63	-	-	-	-	-	-	2,388	3,318
	Rub Walls	3350.140	1,200.00 sf	31.00 /mh	1,488	0.15 /sf	180	-	-	-	-	-	-	1,668	2,263
	Oil Wall Forms	3100.310	1,105.84 sf	31.00 /mh	0	0.02 /sf	22	-	-	-	-	-	-	22	23
	Nails and Hardware	3150.200	1,105.84 sf	31.00 /mh	0	0.04 /sf	44	-	-	-	-	-	-	45	45
	Form Ties 10"	3150.632	276.46 ea	31.00 /mh	0	2.25 /ea	622	-	-	-	-	-	-	622	622
	Dimension Lumber	3150.200	1,105.84 sf	31.00 /mh	0	0.50 /sf	553	-	-	-	-	-	-	553	553
	Grout Slurry Bottom of Walls	3150.200	82.00 cf	31.00 /mh	636	15.00 /cf	1,230	-	-	-	-	-	-	1,866	2,120
	Clarifer 5 and 6 weir wall		17.00 cy		17,405		7,734	/cy					569	25,707	32,669
	Concrete Concrete				192,999		280,295						26,265	499,559	576,758
	300 Secondary Clarifiers 5 and 6				192,999		280,295	/LS					26,265	499,559	576,758
	350 Step Feed Process Building														
	Concrete Concrete														
	0302- Step Feed Sump Slab and Trench drain support slab														
	5000 psi Concrete	3310.100	4.90 cy	-	-	165.00 /cy	864	-	-	-	-	-	-	864	864
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	4.90 cy	31.00 /mh	325	-	-	-	-	-	-	31.26 /cy	164	489	619
	Formwork S.O.G. Edge Form < 1'	3100.120	78.96 sf	31.00 /mh	783	1.50 /sf	124	-	-	-	-	-	-	908	1,221
	Finegrade Below Concrete	3150.650	185.00 sf	31.00 /mh	115	-	-	-	-	-	-	-	-	115	161
	Finish- Hard Trowel	3350.110	185.00 sf	31.00 /mh	80	/sf		-	-	-	-	-	-	80	112
	Waterstop 6" Flat	3510.610	20.00 lf	31.00 /mh	62	5.00 /lf	105	-	-	-	-	-	-	167	192
	Oil SOG Form	3100.310	78.96 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	78.96 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	78.96 sf	31.00 /mh	0	0.50 /sf	39	-	-	-	-	-	-	40	40
	Step Feed Sump Slab and Trench drain support slab		4.90 cy		1,365		1,138	/cy					164	2,667	3,213
	0302- Step Feed Base Slab for basement														
	5000 psi Concrete	3310.100	149.49 cy	-	-	165.00 /cy	26,392	-	-	-	-	-	-	26,392	26,392
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	149.49 cy	31.00 /mh	3,471	-	-	-	-	-	-	31.26 /cy	5,000	8,471	9,860
	Formwork S.O.G. Edge Form > 1'	3100.120	399.28 sf	31.00 /mh	3,961	1.50 /sf	629	-	-	-	-	-	-	4,590	6,174
	Formwork S.O.G. Const Joints > 1'	3100.120	65.10 sf	31.00 /mh	928	1.50 /sf	103	-	-	-	-	-	-	1,031	1,402
	CJ Prep Slab	3350.170	65.10 sf	31.00 /mh	50	0.15 /sf	10	-	-	-	-	-	-	60	80
	Finegrade Below Concrete	3150.650	1,860.00 sf	31.00 /mh	1,153	-	-	-	-	-	-	-	-	1,153	1,614
	Finish- Hard Trowel	3350.110	1,860.00 sf	31.00 /mh	807	/sf		-	-	-	-	-	-	807	1,130
	Liquid Curing Compounds	3390.170	1,860.00 sf	31.00 /mh	115	0.06 /sf	112	-	-	-	-	-	-	227	273
	Blockouts in Concrete	3150.194	136.00 sf	31.00 /mh	1,476	2.00 /sf	272	-	-	-	-	-	-	1,748	2,338
	Waterstop 6" Flat	3510.610	244.00 lf	31.00 /mh	756	5.00 /lf	1,281	-	-	-	-	-	-	2,037	2,340
	Oil SOG Form	3100.310	464.38 sf	31.00 /mh	0	0.02 /sf	9	-	-	-	-	-	-	9	9
	Nails and Hardware	3150.200	399.28 sf	31.00 /mh	0	0.04 /sf	16	-	-	-	-	-	-	16	16
	Dimension Lumber	3150.200	399.28 sf	31.00 /mh	0	0.50 /sf	200	-	-	-	-	-	-	200	200
	Waterstop fittings	3510.610	8.00 ea	31.00 /mh	496	55.00 /ea	462	-	-	-	-	-	-	958	1,156

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- Step Feed Base Slab for basement														
	Pipe Tie Downs (Trench Drain)	3150.200	10.00 ea	31.00 /mh	620	150.00 /ea	1,500	-	-	-	-	-	-	2,120	2,368
	Step Feed Base Slab for basement		149.49 cy		13,835		30,985	/cy					5,000	49,820	55,354
	0302- Step Feed Building Foundation Pad														
	5000 psi Concrete	3310.100	24.44 cy	-	-	165.00 /cy	4,316	-	-	-	-	-	-	4,316	4,316
	Slab Placement Count	3310.360	11.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	24.44 cy	31.00 /mh	811	-	-	-	-	-	-	31.26 /cy	818	1,628	1,953
	Formwork S.O.G. Edge Form > 1'	3100.120	484.00 sf	31.00 /mh	4,801	1.50 /sf	762	-	-	-	-	-	-	5,564	7,484
	Finegrade Below Concrete	3150.650	330.00 sf	31.00 /mh	205	-	-	-	-	-	-	-	-	205	286
	Finish- Hard Trowel	3350.110	330.00 sf	31.00 /mh	143	/sf	-	-	-	-	-	-	-	143	201
	Oil SOG Form	3100.310	484.00 sf	31.00 /mh	0	0.02 /sf	10	-	-	-	-	-	-	10	10
	Nails and Hardware	3150.200	484.00 sf	31.00 /mh	0	0.04 /sf	19	-	-	-	-	-	-	20	20
	Dimension Lumber	3150.200	484.00 sf	31.00 /mh	0	0.50 /sf	242	-	-	-	-	-	-	242	242
	Step Feed Building Foundation Pad		24.44 cy		5,960		5,349	/cy					818	12,127	14,511
	0302- Trench drain and dumpster steel support slabs														
	5000 psi Concrete	3310.100	28.00 cy	-	-	165.00 /cy	4,943	-	-	-	-	-	-	4,943	4,943
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Slab on Grade	3310.230	28.00 cy	31.00 /mh	604	-	-	-	-	-	-	-	-	604	845
	Formwork S.O.G. Edge Form < 1'	3100.120	314.90 sf	31.00 /mh	1,464	1.50 /sf	496	-	-	-	-	-	-	1,960	2,546
	Finegrade Below Concrete	3150.650	1,100.00 sf	31.00 /mh	682	-	-	-	-	-	-	-	-	682	955
	Finish- Hard Trowel	3350.110	1,100.00 sf	31.00 /mh	477	/sf	-	-	-	-	-	-	-	477	668
	Liquid Curing Compounds	3390.170	600.00 sf	31.00 /mh	37	0.06 /sf	36	-	-	-	-	-	-	73	88
	Oil SOG Form	3100.310	314.90 sf	31.00 /mh	0	0.02 /sf	6	-	-	-	-	-	-	6	6
	Nails and Hardware	3150.200	314.90 sf	31.00 /mh	0	0.04 /sf	13	-	-	-	-	-	-	13	13
	Dimension Lumber	3150.200	314.90 sf	31.00 /mh	0	0.50 /sf	157	-	-	-	-	-	-	158	158
	Pipe Tie Downs (Medium)	3150.200	57.00 ea	31.00 /mh	1,767	150.00 /ea	8,550	-	-	-	-	-	-	10,317	11,024
	Trench drain and dumpster steel support slabs		28.00 cy		5,032		14,202	/cy						19,234	21,246
	0302- Step Feed Dumpster bay, Screw Press and Electrical Rooms Base Slab														
	5000 psi Concrete	3310.100	156.00 cy	-	-	165.00 /cy	27,542	-	-	-	-	-	-	27,542	27,542
	Slab Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	156.00 cy	31.00 /mh	4,140	-	-	-	-	-	-	31.26 /cy	5,218	9,358	11,013
	Formwork S.O.G. Edge Form < 1'	3100.120	232.00 sf	31.00 /mh	2,301	1.50 /sf	365	-	-	-	-	-	-	2,667	3,587
	Formwork S.O.G. Const Joints < 1'	3100.120	122.00 sf	31.00 /mh	1,740	1.50 /sf	192	-	-	-	-	-	-	1,932	2,628
	CJ Prep Slab	3350.170	102.00 sf	31.00 /mh	79	0.15 /sf	15	-	-	-	-	-	-	94	126
	Finegrade Below Concrete	3150.650	3,120.00 sf	31.00 /mh	1,934	-	-	-	-	-	-	-	-	1,934	2,708
	Finish- Hard Trowel	3350.110	3,120.00 sf	31.00 /mh	1,354	/sf	-	-	-	-	-	-	-	1,354	1,896
	Liquid Curing Compounds	3390.170	3,120.00 sf	31.00 /mh	193	0.06 /sf	187	-	-	-	-	-	-	381	458
	Blockouts in Concrete	3150.194	424.00 sf	31.00 /mh	4,600	2.00 /sf	848	-	-	-	-	-	-	5,448	7,289
	10 Mil. Vapor Barrier	3150.630	3,120.00 sf	31.00 /mh	193	0.15 /sf	515	-	-	-	-	-	-	708	786
	Oil SOG Form	3100.310	326.00 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	7	7
	Nails and Hardware	3150.200	224.00 sf	31.00 /mh	0	0.04 /sf	9	-	-	-	-	-	-	9	9
	Dimension Lumber	3150.200	224.00 sf	31.00 /mh	0	0.50 /sf	112	-	-	-	-	-	-	112	112
	Straighten and Tie down Trench Drains	3150.200	100.00 lf	31.00 /mh	775	5.00 /sf	500	-	-	-	-	-	-	1,275	1,585
	Expansion Joint Sheets 3/4in thick	3150.720	64.00 sf	31.00 /mh	496	6.00 /sf	403	-	-	-	-	-	-	899	1,098
	Step Feed Dumpster bay, Screw Press and Electrical Rooms Base Slab		156.00 cy		17,807		30,695	/cy					5,218	53,720	60,843
	0302- Step Feed Curb at botom PEMB dumpster, elect and press rooms														
	5000 psi Concrete	3310.100	9.24 cy	-	-	165.00 /cy	1,632	-	-	-	-	-	-	1,632	1,632
	Slab Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Slab on Grade	3310.230	9.24 cy	31.00 /mh	1,839	-	-	-	-	-	-	-	-	1,839	2,575
	Formwork S.O.G. Edge Form < 1'	3100.120	376.98 sf	31.00 /mh	3,740	1.50 /sf	594	-	-	-	-	-	-	4,333	5,829
	Formwork S.O.G. Const Joints < 1'	3100.120	8.04 sf	31.00 /mh	115	1.50 /sf	13	-	-	-	-	-	-	127	173
	CJ Prep Slab	3350.170	8.04 sf	31.00 /mh	6	0.15 /sf	1	-	-	-	-	-	-	7	10
	Finegrade Below Concrete	3150.650	372.40 sf	31.00 /mh	231	-	-	-	-	-	-	-	-	231	323
	Finish- Hard Trowel	3350.110	372.40 sf	31.00 /mh	162	/sf	-	-	-	-	-	-	-	162	226
	Liquid Curing Compounds	3390.170	372.40 sf	31.00 /mh	23	0.06 /sf	22	-	-	-	-	-	-	45	55
	Chamfer 3/4"	3150.625	560.00 lf	31.00 /mh	868	0.20 /lf	118	-	-	-	-	-	-	986	1,333
	Oil SOG Form	3100.310	385.02 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	376.98 sf	31.00 /mh	0	0.04 /sf	15	-	-	-	-	-	-	15	15
	Dimension Lumber	3150.200	376.98 sf	31.00 /mh	0	0.50 /sf	188	-	-	-	-	-	-	189	189
	Drill and Epoxy #5	3210.101	560.00 ea	31.00 /mh	5,208	5.00 /ea	2,940	-	-	-	-	-	-	8,148	10,231
	Step Feed Curb at botom PEMB dumpster, elect and press rooms		9.24 cy		12,192		5,530	/cy						17,722	22,599
	0302- Step Feed Chem Room Sump Slabs														
	5000 psi Concrete	3310.100	5.33 cy	-	-	165.00 /cy	941	-	-	-	-	-	-	941	941
	Pump Place Slab on Grade	3310.230	5.33 cy	31.00 /mh	265	-	-	-	-	-	-	31.26 /cy	178	444	550
	Formwork S.O.G. Edge Form < 1'	3100.120	96.00 sf	31.00 /mh	952	1.50 /sf	151	-	-	-	-	-	-	1,104	1,484
	Finegrade Below Concrete	3150.650	144.00 sf	31.00 /mh	89	-	-	-	-	-	-	-	-	89	125
	Finish- Hard Trowel	3350.110	144.00 sf	31.00 /mh	63	/sf	-	-	-	-	-	-	-	63	88
	Liquid Curing Compounds	3390.170	144.00 sf	31.00 /mh	9	0.06 /sf	9	-	-	-	-	-	-	18	21
	Waterstop 6" Flat	3510.610	64.00 lf	31.00 /mh	198	5.00 /lf	336	-	-	-	-	-	-	534	614
	Oil SOG Form	3100.310	96.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	96.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	96.00 sf	31.00 /mh	0	0.50 /sf	48	-	-	-	-	-	-	48	48

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Step Feed Chem Room Sump Slabs		5.33 cy		1,577		1,491	/cy					178	3,246	3,877
0302-	Step Feed Chem Building Rooms Base Slab														
	5000 psi Concrete	3310.100	63.00 cy	-	-	165.00 /cy	11,123	-	-	-	-	-	-	11,123	11,123
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	63.00 cy	31.00 /mh	2,612	-	-	-	-	-	-	31.26 /cy	2,107	4,719	5,764
	Formwork S.O.G. Edge Form > 1'	3100.120	195.00 sf	31.00 /mh	1,934	1.50 /sf	307	-	-	-	-	-	-	2,242	3,015
	Formwork S.O.G. Const Joints > 1'	3100.120	27.50 sf	31.00 /mh	392	1.50 /sf	43	-	-	-	-	-	-	435	592
	CJ Prep Slab	3350.170	27.50 sf	31.00 /mh	21	0.15 /sf	4	-	-	-	-	-	-	25	34
	Finegrade Below Concrete	3150.650	1,232.00 sf	31.00 /mh	764	-	-	-	-	-	-	-	-	764	1,069
	Finish- Hard Trowel	3350.110	1,232.00 sf	31.00 /mh	535	/sf	-	-	-	-	-	-	-	535	749
	Liquid Curing Compounds	3390.170	1,232.00 sf	31.00 /mh	76	0.06 /sf	74	-	-	-	-	-	-	150	181
	Blockouts in Concrete	3150.194	48.00 sf	31.00 /mh	521	2.00 /sf	96	-	-	-	-	-	-	617	825
	10 Mil. Vapor Barrier	3150.630	1,232.00 sf	31.00 /mh	76	0.15 /sf	203	-	-	-	-	-	-	280	310
	Oil SOG Form	3100.310	222.50 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	5	5
	Nails and Hardware	3150.200	195.00 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Dimension Lumber	3150.200	195.00 sf	31.00 /mh	0	0.50 /sf	98	-	-	-	-	-	-	98	98
	Step Feed Chem Building Rooms Base Slab		63.00 cy		6,932		11,960	/cy					2,107	21,000	23,773
0302-	Metal Building Curb at Chem areas and Pump Room Deck Step Feed														
	5000 psi Concrete	3310.100	10.56 cy	-	-	165.00 /cy	1,865	-	-	-	-	-	-	1,865	1,865
	Slab Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Slab on Grade	3310.230	10.56 cy	31.00 /mh	1,401	-	-	-	-	-	-	-	-	1,401	1,962
	Formwork S.O.G. Edge Form < 1'	3100.120	430.58 sf	31.00 /mh	4,271	1.50 /sf	678	-	-	-	-	-	-	4,950	6,658
	Formwork S.O.G. Const Joints < 1'	3100.120	14.74 sf	31.00 /mh	210	1.50 /sf	23	-	-	-	-	-	-	233	317
	CJ Prep Slab	3350.170	14.74 sf	31.00 /mh	11	0.15 /sf	2	-	-	-	-	-	-	14	18
	Finegrade Below Concrete	3150.650	425.60 sf	31.00 /mh	264	-	-	-	-	-	-	-	-	264	369
	Finish- Hard Trowel	3350.110	425.60 sf	31.00 /mh	185	/sf	-	-	-	-	-	-	-	185	259
	Liquid Curing Compounds	3390.170	425.60 sf	31.00 /mh	26	0.06 /sf	26	-	-	-	-	-	-	52	62
	Chamfer 3/4"	3150.625	640.00 lf	31.00 /mh	992	0.20 /lf	134	-	-	-	-	-	-	1,126	1,523
	Oil SOG Form	3100.310	445.32 sf	31.00 /mh	0	0.02 /sf	9	-	-	-	-	-	-	9	9
	Nails and Hardware	3150.200	430.58 sf	31.00 /mh	0	0.04 /sf	17	-	-	-	-	-	-	17	17
	Dimension Lumber	3150.200	430.58 sf	31.00 /mh	0	0.50 /sf	215	-	-	-	-	-	-	215	215
	Drill and Epoxy #5	3210.101	640.00 ea	31.00 /mh	5,952	5.00 /ea	3,360	-	-	-	-	-	-	9,312	11,693
	Metal Building Curb at Chem areas and Pump Room Deck Step Feed		10.56 cy		13,314		6,330	/cy						19,643	24,968
0302-	Step Feed Building HVAC Pads														
	5000 psi Concrete	3310.100	6.67 cy	-	-	165.00 /cy	1,177	-	-	-	-	-	-	1,177	1,177
	Crane Place Slab on Grade	3310.230	6.67 cy	31.00 /mh	332	-	-	-	-	-	-	-	-	332	464
	Formwork S.O.G. Edge Form > 1'	3100.120	96.00 sf	31.00 /mh	952	1.50 /sf	151	-	-	-	-	-	-	1,104	1,484
	Finegrade Below Concrete	3150.650	120.00 sf	31.00 /mh	74	-	-	-	-	-	-	-	-	74	104
	Finish- Hard Trowel	3350.110	120.00 sf	31.00 /mh	52	/sf	-	-	-	-	-	-	-	52	73
	Liquid Curing Compounds	3390.170	120.00 sf	31.00 /mh	7	0.06 /sf	7	-	-	-	-	-	-	15	18
	Blockouts in Concrete	3150.194	16.00 sf	31.00 /mh	174	2.00 /sf	32	-	-	-	-	-	-	206	275
	Chamfer 3/4"	3150.625	64.00 lf	31.00 /mh	99	0.20 /lf	13	-	-	-	-	-	-	113	152
	Road Base Below Concrete	2305.300	4.44 cy	31.00 /mh	54	22.00 /ton	194	-	-	-	-	-	-	248	269
	Oil SOG Form	3100.310	96.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	96.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	96.00 sf	31.00 /mh	0	0.50 /sf	48	-	-	-	-	-	-	48	48
	SOG Rebar	3210.104	0.83 tn	31.00 /mh	646	1,400.00 /tn	1,225	-	-	-	-	-	-	1,871	2,129
	Step Feed Building HVAC Pads		6.67 cy		2,391		2,853	/cy						5,244	6,200
0303-	Step Feed Basement Sump Walls														
	Crane Place Walls	3310.260	1.48 cy	31.00 /mh	98	-	-	-	-	-	-	-	-	98	138
	5000 psi Concrete	3310.100	1.48 cy	-	-	165.00 /cy	262	-	-	-	-	-	-	262	262
	Job Built with Plyform 0-4'	3100.180	80.00 sf	31.00 /mh	744	1.50 /sf	126	-	-	-	-	-	-	870	1,168
	CJ Prep Walls	3350.170	20.00 sf	31.00 /mh	186	0.15 /sf	3	-	-	-	-	-	-	189	263
	Finish- Top of Wall	3350.110	20.00 sf	31.00 /mh	9	/sf	-	-	-	-	-	-	-	9	12
	Liquid Curing Walls	3390.170	100.00 sf	31.00 /mh	3	0.06 /sf	6	-	-	-	-	-	-	9	10
	Grind/Patch Walls	3350.130	80.00 sf	31.00 /mh	30	0.05 /sf	4	-	-	-	-	-	-	34	46
	Waterstop 6" Flat	3510.610	20.00 lf	31.00 /mh	56	5.00 /lf	105	-	-	-	-	-	-	161	183
	Rub Walls	3350.140	40.00 sf	31.00 /mh	50	0.15 /sf	6	-	-	-	-	-	-	56	75
	Oil Wall Forms	3100.310	80.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	80.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties 12"	3150.632	20.00 ea	31.00 /mh	0	2.35 /ea	47	-	-	-	-	-	-	47	47
	Dimension Lumber	3150.200	80.00 sf	31.00 /mh	0	0.50 /sf	40	-	-	-	-	-	-	40	40
	Rebar Templates	3200.980	20.00 lf	31.00 /mh	31	0.50 /lf	10	-	-	-	-	-	-	41	53
	Step Feed Basement Sump Walls		1.48 cy		1,206		613	/cy						1,820	2,302
0303-	Step Feed Basin Basement Walls														
	Pump Place Walls	3310.260	179.90 cy	31.00 /mh	4,177	-	-	-	-	-	-	31.26 /cy	6,017	10,194	11,865
	5000 psi Concrete	3310.100	179.90 cy	-	-	165.00 /cy	31,761	-	-	-	-	-	-	31,761	31,761
	Wall Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Gang Form System 12-16'	3100.180	6,206.00 sf	31.00 /mh	28,858	2.50 /sf	16,291	-	-	-	-	-	-	45,149	56,692
	Wall Pilaster Forms	3150.192	289.71 sf	31.00 /mh	3,143	1.50 /sf	456	-	-	-	-	-	-	3,600	4,857
	Wall Bulkhead Forms	3150.192	87.00 sf	31.00 /mh	1,241	1.50 /sf	137	-	-	-	-	-	-	1,378	1,874

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- Step Feed Basin Basement Walls														
	CJ Prep Walls	3350.170	408.00 sf	31.00 /mh	316	0.15 /sf	61	-	-	-	-	-	-	377	504
	Finish- Top of Wall	3350.110	321.00 sf	31.00 /mh	139	/sf		-	-	-	-	-	-	139	195
	Liquid Curing Walls	3390.170	6,816.71 sf	31.00 /mh	211	0.06 /sf	409	-	-	-	-	-	-	620	705
	Grind/Patch Walls	3350.130	6,495.71 sf	31.00 /mh	2,416	0.05 /sf	325	-	-	-	-	-	-	2,741	3,708
	Blockouts in Concrete	3150.194	248.00 sf	31.00 /mh	2,691	2.00 /sf	496	-	-	-	-	-	-	3,187	4,263
	Waterstop 6" Flat	3510.610	58.00 lf	31.00 /mh	180	5.00 /lf	305	-	-	-	-	-	-	484	556
	Rub Walls	3350.140	3,103.00 sf	31.00 /mh	3,848	0.15 /sf	465	-	-	-	-	-	-	4,313	5,852
	Oil Wall Forms	3100.310	6,495.71 sf	31.00 /mh	2	0.02 /sf	130	-	-	-	-	-	-	132	133
	Nails and Hardware	3150.200	6,495.71 sf	31.00 /mh	2	0.04 /sf	260	-	-	-	-	-	-	262	263
	Form Ties 18"	3150.632	1,551.50 ea	31.00 /mh	0	2.55 /ea	3,956	-	-	-	-	-	-	3,957	3,957
	Form Ties Specialty	3150.632	43.50 ea	31.00 /mh	270	5.00 /ea	218	-	-	-	-	-	-	487	595
	Dimension Lumber	3150.200	6,495.71 sf	31.00 /mh	2	0.50 /sf	3,248	-	-	-	-	-	-	3,250	3,251
	Rebar Templates	3200.980	214.00 lf	31.00 /mh	332	0.50 /lf	107	-	-	-	-	-	-	439	571
	Bonding agent and patch tie hole	3350.130	516.00 ea	31.00 /mh	2,399	2.00 /ea	1,032	-	-	-	-	-	-	3,431	4,391
	Grout Slurry Bottom of Walls	3150.200	106.00 cf	31.00 /mh	822	15.00 /cf	1,590	-	-	-	-	-	-	2,412	2,740
	Rebar Formsavers # 6	3210.108	22.00 ea	31.00 /mh	341	30.00 /ea	660	-	-	-	-	-	-	1,001	1,137
	Step Feed Basin Basement Walls		179.90 cy		51,390		61,906	/cy					6,017	119,314	139,870
	0303- Step Feed Building Concrete Stem Walls														
	Pump Place Walls	3310.260	61.51 cy	31.00 /mh	1,734	-	-	-	-	-	-	31.26 /cy	2,057	3,792	4,485
	5000 psi Concrete	3310.100	61.51 cy	-	-	165.00 /cy	10,860	-	-	-	-	-	-	10,860	10,860
	Wall Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Rented Form System 0-4'	3100.180	1,648.40 sf	31.00 /mh	12,775	1.50 /sf	2,596	-	-	-	-	-	-	15,371	20,481
	Wall Pilaster Forms	3150.192	325.34 sf	31.00 /mh	3,530	1.50 /sf	512	-	-	-	-	-	-	4,042	5,454
	Wall Bulkhead Forms	3150.192	42.35 sf	31.00 /mh	604	1.50 /sf	67	-	-	-	-	-	-	671	912
	CJ Prep Walls	3350.170	476.55 sf	31.00 /mh	369	0.15 /sf	71	-	-	-	-	-	-	441	589
	Finish- Top of Wall	3350.110	434.20 sf	31.00 /mh	188	/sf		-	-	-	-	-	-	188	264
	Liquid Curing Walls	3390.170	2,407.94 sf	31.00 /mh	75	0.06 /sf	144	-	-	-	-	-	-	219	249
	Grind/Patch Walls	3350.130	1,973.74 sf	31.00 /mh	734	0.05 /sf	99	-	-	-	-	-	-	833	1,127
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Rub Walls	3350.140	80.00 sf	31.00 /mh	99	0.15 /sf	12	-	-	-	-	-	-	111	151
	Oil Wall Forms	3100.310	1,973.74 sf	31.00 /mh	1	0.02 /sf	39	-	-	-	-	-	-	40	40
	Nails and Hardware	3150.200	1,973.74 sf	31.00 /mh	1	0.04 /sf	79	-	-	-	-	-	-	80	80
	Form Ties 20"	3150.632	412.10 ea	31.00 /mh	0	2.80 /ea	1,154	-	-	-	-	-	-	1,154	1,154
	Form Ties Specialty	3150.632	34.87 ea	31.00 /mh	216	5.00 /ea	174	-	-	-	-	-	-	391	477
	Dimension Lumber	3150.200	1,973.74 sf	31.00 /mh	1	0.50 /sf	987	-	-	-	-	-	-	987	988
	Rebar Templates	3200.980	260.00 lf	31.00 /mh	403	0.50 /lf	130	-	-	-	-	-	-	533	694
	Step Feed Building Concrete Stem Walls		61.51 cy		21,425		17,053	/cy					2,057	40,535	49,105
	0304- Step Feed Basement Upper level Deck														
	5000 psi Concrete	3310.100	88.00 cy	-	-	165.00 /cy	15,536	-	-	-	-	-	-	15,536	15,536
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Suspended Slab	3310.240	88.00 cy	31.00 /mh	2,481	-	-	-	-	-	-	31.26 /cy	2,943	5,425	6,417
	Shore Suspended Slab 0-15'	3100.124	1,469.14 sf	31.00 /mh	15,940	4.25 /sf	6,556	-	-	-	-	-	-	22,496	28,872
	Slab Edge Form > 1'	3100.124	324.00 sf	31.00 /mh	5,022	2.00 /sf	648	-	-	-	-	-	-	5,670	7,679
	Suspended Slab Const Joint	3100.124	39.00 sf	31.00 /mh	423	1.50 /sf	59	-	-	-	-	-	-	482	651
	CJ Prep Elevated Slab CJ	3350.170	39.00 sf	31.00 /mh	30	0.20 /sf	8	-	-	-	-	-	-	38	50
	Finish- Hard Trowel	3350.110	1,469.14 sf	31.00 /mh	638	/sf		-	-	-	-	-	-	638	893
	Liquid Curing Compounds	3390.170	1,469.14 sf	31.00 /mh	91	0.06 /sf	88	-	-	-	-	-	-	179	216
	Grind and Patch Deck Bottom	3350.130	1,469.14 sf	31.00 /mh	547	0.05 /sf	73	-	-	-	-	-	-	620	839
	Blockouts in Concrete	3150.194	24.00 sf	31.00 /mh	260	2.00 /sf	48	-	-	-	-	-	-	308	413
	Chamfer 3/4"	3150.625	100.00 lf	31.00 /mh	155	0.20 /lf	21	-	-	-	-	-	-	176	238
	Oil Suspended Slab Frm	3100.310	1,469.14 sf	31.00 /mh	0	0.02 /sf	29	-	-	-	-	-	-	30	30
	Nails and Hardware	3150.200	1,469.14 sf	31.00 /mh	0	0.04 /sf	59	-	-	-	-	-	-	59	59
	Rub Slab Bottom	3350.140	1,469.14 sf	31.00 /mh	1,366	0.12 /sf	176	-	-	-	-	-	-	1,543	2,089
	Beam Side Forms	3100.140	200.00 sf	31.00 /mh	2,480	1.50 /sf	315	-	-	-	-	-	-	2,795	3,787
	Beam Bottom Forms	3100.140	200.00 sf	31.00 /mh	2,170	4.25 /sf	893	-	-	-	-	-	-	3,063	3,931
	Rebar Formsavers # 6	3210.108	170.00 ea	31.00 /mh	2,635	30.00 /ea	5,100	-	-	-	-	-	-	7,735	8,789
	Step Feed Basement Upper level Deck		88.00 cy		34,240		29,609	/cy					2,943	66,792	80,488
	0310- Step Feed Basement Pump Pads														
	Equipment Pad Form 6"	3100.164	48.00 sf	31.00 /mh	491	1.50 /sf	76	-	-	-	-	-	-	567	763
	Oil Equipment Pad Form	3100.310	48.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	5000 psi Concrete	3310.100	1.67 cy	-	-	165.00 /cy	294	-	-	-	-	-	-	294	294
	Other Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	1.67 cy	31.00 /mh	221	-	-	-	-	-	-	-	-	221	310
	Liquid Curing Compounds	3390.170	90.00 sf	31.00 /mh	6	0.06 /sf	5	-	-	-	-	-	-	11	13
	Finish- Hard Trowel	3350.110	90.00 sf	31.00 /mh	39	/sf		-	-	-	-	-	-	39	55
	Chamfer	3150.625	120.00 lf	31.00 /mh	55	0.20 /lf	25	-	-	-	-	-	-	81	103
	Misc. Pad Rebar	3210.104	0.21 tn	31.00 /mh	161	1,400.00 /tn	305	-	-	-	-	-	-	466	531
	Nails and Hardware	3150.200	48.00 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Drill and Epoxy #4	3210.101	120.00 ea	31.00 /mh	744	4.00 /ea	504	-	-	-	-	-	-	1,248	1,546
	Step Feed Basement Pump Pads		1.67 cy		1,718		1,213	/cy						2,930	3,617
	0310- Screw Press Pads Step Feed 8 ea														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0310-	Screw Press Pads Step Feed 8 ea														
	Equipment Pad Form > 8"	3100.164	160.00 sf	31.00 /mh	1,637	1.50 /sf	252	-	-	-	-	-	-	1,889	2,544
	Oil Equipment Pad Form	3100.310	160.00 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3
	5000 psi Concrete	3310.100	3.56 cy	-	-	165.00 /cy	628	-	-	-	-	-	-	628	628
	Other Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	3.56 cy	31.00 /mh	472	-	-	-	-	-	-	-	-	472	661
	Liquid Curing Compounds	3390.170	48.00 sf	31.00 /mh	3	0.06 /sf	3	-	-	-	-	-	-	6	7
	Finish- Hard Trowel	3350.110	48.00 sf	31.00 /mh	21	/sf		-	-	-	-	-	-	21	29
	Chamfer	3150.625	96.00 lf	31.00 /mh	149	0.20 /lf	20	-	-	-	-	-	-	169	228
	Misc. Pad Rebar	3210.104	0.44 tn	31.00 /mh	344	1,400.00 /tn	652	-	-	-	-	-	-	997	1,134
	Nails and Hardware	3150.200	160.00 sf	31.00 /mh	0	0.04 /sf	6	-	-	-	-	-	-	6	6
	Drill and Epoxy #4	3210.101	96.00 ea	31.00 /mh	595	4.00 /ea	403	-	-	-	-	-	-	998	1,236
	Screw Press Pads Step Feed 8 ea		3.56 cy		3,221		1,968	/cy						5,189	6,477
0310-	Step Feed Electrical Room Equipment Pads														
	Equipment Pad Form 6"	3100.164	113.00 sf	31.00 /mh	1,156	1.50 /sf	178	-	-	-	-	-	-	1,334	1,796
	Oil Equipment Pad Form	3100.310	113.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	5000 psi Concrete	3310.100	5.19 cy	-	-	165.00 /cy	916	-	-	-	-	-	-	916	916
	Other Placement Count	3310.360	9.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	5.19 cy	31.00 /mh	688	-	-	-	-	-	-	-	-	688	963
	Liquid Curing Compounds	3390.170	280.00 sf	31.00 /mh	17	0.06 /sf	17	-	-	-	-	-	-	34	41
	Finish- Hard Trowel	3350.110	280.00 sf	31.00 /mh	122	/sf		-	-	-	-	-	-	122	170
	Chamfer	3150.625	212.00 lf	31.00 /mh	98	0.20 /lf	45	-	-	-	-	-	-	142	182
	Misc. Pad Rebar	3210.104	0.65 tn	31.00 /mh	502	1,400.00 /tn	952	-	-	-	-	-	-	1,454	1,655
	Nails and Hardware	3150.200	113.00 sf	31.00 /mh	0	0.04 /sf	5	-	-	-	-	-	-	5	5
	Drill and Epoxy #4	3210.101	246.00 ea	31.00 /mh	1,525	4.00 /ea	1,033	-	-	-	-	-	-	2,558	3,168
	Step Feed Electrical Room Equipment Pads		5.19 cy		4,108		3,147	/cy						7,255	8,899
0310-	Step Feed Building Chem Room and Blower Room Equip Pads														
	Equipment Pad Form > 8"	3100.164	188.00 sf	31.00 /mh	1,923	1.50 /sf	296	-	-	-	-	-	-	2,219	2,989
	Oil Equipment Pad Form	3100.310	188.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	5000 psi Concrete	3310.100	7.11 cy	-	-	165.00 /cy	1,255	-	-	-	-	-	-	1,255	1,255
	Buggy Place Equipment Pads	3310.300	7.11 cy	31.00 /mh	944	-	-	-	-	-	-	-	-	944	1,321
	Liquid Curing Compounds	3390.170	192.00 sf	31.00 /mh	12	0.06 /sf	12	-	-	-	-	-	-	23	28
	Finish- Hard Trowel	3350.110	192.00 sf	31.00 /mh	83	/sf		-	-	-	-	-	-	83	117
	Chamfer	3150.625	232.00 lf	31.00 /mh	107	0.20 /lf	49	-	-	-	-	-	-	156	199
	Misc. Pad Rebar	3210.104	0.89 tn	31.00 /mh	689	1,400.00 /tn	1,306	-	-	-	-	-	-	1,995	2,271
	Nails and Hardware	3150.200	188.00 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Drill and Epoxy #4	3210.101	232.00 ea	31.00 /mh	1,438	4.00 /ea	974	-	-	-	-	-	-	2,413	2,988
	Step Feed Building Chem Room and Blower Room Equip Pads		7.11 cy		5,197		3,904	/cy						9,100	11,179
0310-	Step Feed Building Door Stoops at Chem Area														
	Equipment Pad Form 8"	3100.164	52.26 sf	31.00 /mh	535	1.50 /sf	82	-	-	-	-	-	-	617	831
	Oil Equipment Pad Form	3100.310	52.26 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	5000 psi Concrete	3310.100	4.00 cy	-	-	165.00 /cy	706	-	-	-	-	-	-	706	706
	Other Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	4.00 cy	31.00 /mh	531	-	-	-	-	-	-	-	-	531	743
	Liquid Curing Compounds	3390.170	108.00 sf	31.00 /mh	7	0.06 /sf	6	-	-	-	-	-	-	13	16
	Finish- Hard Trowel	3350.110	108.00 sf	31.00 /mh	47	/sf		-	-	-	-	-	-	47	66
	Chamfer	3150.625	120.00 lf	31.00 /mh	55	0.20 /lf	25	-	-	-	-	-	-	81	103
	Misc. Pad Rebar	3210.104	0.34 tn	31.00 /mh	260	1,400.00 /tn	493	-	-	-	-	-	-	752	856
	Nails and Hardware	3150.200	52.26 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Drill and Epoxy #4	3210.101	120.00 ea	31.00 /mh	744	4.00 /ea	504	-	-	-	-	-	-	1,248	1,546
	Step Feed Building Door Stoops at Chem Area		4.00 cy		2,178		1,820	/cy						3,998	4,869
	Concrete Concrete				205,086		231,767						24,503	461,356	543,390
	350 Step Feed Process Building				205,086		231,767	/LS					24,503	461,356	543,390
400	Orbal Anaerobic Reactor														
	Concrete Concrete														
0302-	Orbal Reactor Stair Bottom Slab														
	5000 psi Concrete	3310.100	1.67 cy	-	-	165.00 /cy	294	-	-	-	-	-	-	294	294
	Truck Place Slab on Grade	3310.230	1.67 cy	31.00 /mh	221	-	-	-	-	-	-	-	-	221	310
	Formwork S.O.G. Edge Form > 1'	3100.120	33.00 sf	31.00 /mh	327	1.50 /sf	52	-	-	-	-	-	-	379	510
	Finegrade Below Concrete	3150.650	30.00 sf	31.00 /mh	19	-	-	-	-	-	-	-	-	19	26
	Finish- Hard Trowel	3350.110	30.00 sf	31.00 /mh	13	/sf		-	-	-	-	-	-	13	18
	Liquid Curing Compounds	3390.170	30.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	4
	Oil SOG Form	3100.310	33.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	33.00 sf	31.00 /mh	0	0.04 /sf	1	-	-	-	-	-	-	1	1
	Dimension Lumber	3150.200	33.00 sf	31.00 /mh	0	0.50 /sf	17	-	-	-	-	-	-	17	17
	SOG Rebar	3210.104	0.21 tn	31.00 /mh	161	1,400.00 /tn	305	-	-	-	-	-	-	466	531
	Orbal Reactor Stair Bottom Slab		1.67 cy		743		672	/cy						1,415	1,712
0303-	Orbal Selector Effluent Box Walls														
	Crane Place Walls	3310.260	2.08 cy	31.00 /mh	414	-	-	-	-	-	-	-	-	414	580
	5000 psi Concrete	3310.100	2.08 cy	-	-	165.00 /cy	367	-	-	-	-	-	-	367	367
	Wall Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0303-	Orbal Selector Effluent Box Walls														
	Job Built with Plyform 0-4'	3100.180	96.00 sf	31.00 /mh	1,339	1.50 /sf	151	-	-	-	-	-	-	1,490	2,026
	CJ Prep Walls	3350.170	18.72 sf	31.00 /mh	15	0.15 /sf	3	-	-	-	-	-	-	17	23
	Finish- Top of Wall	3350.110	18.72 sf	31.00 /mh	8	/sf		-	-	-	-	-	-	8	11
	Liquid Curing Walls	3390.170	114.72 sf	31.00 /mh	4	0.06 /sf	7	-	-	-	-	-	-	10	12
	Grind/Patch Walls	3350.130	96.00 sf	31.00 /mh	36	0.05 /sf	5	-	-	-	-	-	-	41	55
	Waterstop Adeka or Swellstop	3510.610	26.00 lf	31.00 /mh	73	8.50 /lf	232	-	-	-	-	-	-	305	334
	Chamfer 3/4"	3150.625	26.00 lf	31.00 /mh	40	0.20 /lf	5	-	-	-	-	-	-	46	62
	Rub Walls	3350.140	96.00 sf	31.00 /mh	119	0.15 /sf	14	-	-	-	-	-	-	133	181
	Oil Wall Forms	3100.310	96.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	96.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Form Ties 14"	3150.632	24.00 ea	31.00 /mh	0	2.40 /ea	58	-	-	-	-	-	-	58	58
	Dimension Lumber	3150.200	96.00 sf	31.00 /mh	0	0.50 /sf	48	-	-	-	-	-	-	48	48
	Rebar Templates	3200.980	16.00 lf	31.00 /mh	25	0.50 /lf	8	-	-	-	-	-	-	33	43
	Orbal Selector Effluent Box Walls		2.08 cy		2,072		904	/cy						2,976	3,805
0304-	Orbal Reactor Effluent Box Susp Slab														
	5000 psi Concrete	3310.100	3.03 cy	-	-	165.00 /cy	535	-	-	-	-	-	-	535	535
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Suspended Slab	3310.240	3.03 cy	31.00 /mh	302	-	-	-	-	-	-	-	-	302	423
	Shore Suspended Slab 0-15'	3100.124	120.00 sf	31.00 /mh	1,674	4.25 /sf	536	-	-	-	-	-	-	2,210	2,879
	Slab Edge Form > 1'	3100.124	23.40 sf	31.00 /mh	435	2.00 /sf	47	-	-	-	-	-	-	482	656
	Finish- Hard Trowel	3350.110	70.00 sf	31.00 /mh	30	/sf		-	-	-	-	-	-	30	43
	Liquid Curing Compounds	3390.170	70.00 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	9	10
	Grind and Patch Deck Bottom	3350.130	70.00 sf	31.00 /mh	26	0.05 /sf	4	-	-	-	-	-	-	30	40
	Blockouts in Concrete	3150.194	16.00 sf	31.00 /mh	174	2.00 /sf	32	-	-	-	-	-	-	206	275
	Waterstop Adeka or Swellstop	3510.610	20.00 lf	31.00 /mh	62	8.50 /lf	179	-	-	-	-	-	-	241	265
	Chamfer 3/4"	3150.625	20.00 lf	31.00 /mh	31	0.20 /lf	4	-	-	-	-	-	-	35	48
	Oil Suspended Slab Frm	3100.310	70.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	70.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Orbal Reactor Effluent Box Susp Slab		3.03 cy		2,738		1,344	/cy						4,083	5,178
0304-	Orbal Reactor Stair Top deck														
	5000 psi Concrete	3310.100	3.00 cy	-	-	165.00 /cy	530	-	-	-	-	-	-	530	530
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Suspended Slab	3310.240	3.00 cy	31.00 /mh	398	-	-	-	-	-	-	-	-	398	557
	Shore Suspended Slab 15-up	3100.124	90.00 sf	31.00 /mh	1,674	4.25 /sf	402	-	-	-	-	-	-	2,076	2,745
	Slab Edge Form < 1'	3100.124	21.58 sf	31.00 /mh	301	2.00 /sf	45	-	-	-	-	-	-	346	467
	Finish- Hard Trowel	3350.110	90.00 sf	31.00 /mh	39	/sf		-	-	-	-	-	-	39	55
	Liquid Curing Compounds	3390.170	90.00 sf	31.00 /mh	6	0.06 /sf	5	-	-	-	-	-	-	11	13
	Grind and Patch Deck Bottom	3350.130	90.00 sf	31.00 /mh	33	0.05 /sf	5	-	-	-	-	-	-	38	51
	Chamfer 3/4"	3150.625	46.00 lf	31.00 /mh	71	0.20 /lf	10	-	-	-	-	-	-	81	109
	Oil Suspended Slab Frm	3100.310	90.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	90.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Rub Slab Bottom	3350.140	90.00 sf	31.00 /mh	84	0.12 /sf	11	-	-	-	-	-	-	95	128
	Orbal Reactor Stair Top deck		3.00 cy		2,606		1,012	/cy						3,619	4,661
0308-	Orbal Reactor Basin Base Slab														
	5000 psi Concrete	3310.100	66.09 cy	-	-	165.00 /cy	11,668	-	-	-	-	-	-	11,668	11,668
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	66.09 cy	31.00 /mh	1,535	-	-	-	-	-	-	31.26 /cy	2,211	3,745	4,359
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	178.44 sf	31.00 /mh	1,770	1.50 /sf	281	-	-	-	-	-	-	2,051	2,759
	Finegrade Below Concrete	3150.650	1,256.64 sf	31.00 /mh	779	-	-	-	-	-	-	-	-	779	1,091
	Finish- Hard Trowel	3350.110	1,256.64 sf	31.00 /mh	545	/sf		-	-	-	-	-	-	545	764
	Liquid Curing Compounds	3390.170	1,256.64 sf	31.00 /mh	78	0.06 /sf	75	-	-	-	-	-	-	153	184
	Waterstop 6" Flat	3510.610	125.00 lf	31.00 /mh	388	5.00 /lf	656	-	-	-	-	-	-	1,044	1,199
	Oil SOG Form	3100.310	178.44 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Nails and Hardware	3150.200	178.44 sf	31.00 /mh	0	0.04 /sf	7	-	-	-	-	-	-	7	7
	Dimension Lumber	3150.200	178.44 sf	31.00 /mh	0	0.50 /sf	89	-	-	-	-	-	-	89	89
	Waterstop Fitting	3510.610	4.00 ea	31.00 /mh	248	55.00 /ea	231	-	-	-	-	-	-	479	578
	Orbal Reactor Basin Base Slab		66.09 cy		5,343		13,012	/cy					2,211	20,565	22,702
0309-	Orbal Reactor Basin Walls														
	Pump Place Walls	3310.260	98.02 cy	31.00 /mh	3,739	-	-	-	-	-	-	31.26 /cy	3,279	7,017	8,513
	5000 psi Concrete	3310.100	98.02 cy	-	-	165.00 /cy	17,305	-	-	-	-	-	-	17,305	17,305
	Wall Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Radius Gang Forms 16- >	3100.182	4,523.89 sf	31.00 /mh	21,036	4.25 /sf	20,188	-	-	-	-	-	-	41,224	49,638
	Wall Bulkhead Forms	3150.192	70.20 sf	31.00 /mh	1,001	1.50 /sf	111	-	-	-	-	-	-	1,112	1,512
	CJ Prep Walls	3350.170	202.52 sf	31.00 /mh	157	0.15 /sf	30	-	-	-	-	-	-	187	250
	Finish- Top of Wall	3350.110	132.32 sf	31.00 /mh	57	/sf		-	-	-	-	-	-	57	80
	Liquid Curing Walls	3390.170	4,656.22 sf	31.00 /mh	144	0.06 /sf	279	-	-	-	-	-	-	424	481
	Grind/Patch Walls	3350.130	4,523.89 sf	31.00 /mh	1,683	0.05 /sf	226	-	-	-	-	-	-	1,909	2,582
	Blockouts in Concrete	3150.194	24.00 sf	31.00 /mh	260	2.00 /sf	48	-	-	-	-	-	-	308	413
	Waterstop 6" Flat	3510.610	60.00 lf	31.00 /mh	186	5.00 /lf	315	-	-	-	-	-	-	501	575
	Chamfer 3/4"	3150.625	240.00 lf	31.00 /mh	372	0.20 /lf	50	-	-	-	-	-	-	422	571
	Rub Walls	3350.140	2,260.00 sf	31.00 /mh	2,802	0.15 /sf	339	-	-	-	-	-	-	3,141	4,262

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0309- Orbal Reactor Basin Walls														
	Oil Wall Forms	3100.310	4,523.89 sf	31.00 /mh	1	0.02 /sf	90	-	-	-	-	-	-	92	92
	Nails and Hardware	3150.200	4,523.89 sf	31.00 /mh	1	0.04 /sf	181	-	-	-	-	-	-	182	183
	Form Ties 14"	3150.632	1,130.97 ea	31.00 /mh	0	2.40 /ea	2,714	-	-	-	-	-	-	2,715	2,715
	Dimension Lumber	3150.200	4,523.89 sf	31.00 /mh	1	0.50 /sf	2,262	-	-	-	-	-	-	2,263	2,264
	Grout Slurry Bottom of Walls	3150.200	47.00 cf	31.00 /mh	364	15.00 /cf	705	-	-	-	-	-	-	1,069	1,215
	Bonding Agent and C.J prep tie holes	3350.130	383.00 ea	31.00 /mh	1,781	2.00 /ea	766	-	-	-	-	-	-	2,547	3,259
	Rebar Formsavers # 5	3210.108	76.00 ea	31.00 /mh	777	27.00 /ea	2,052	-	-	-	-	-	-	2,829	3,140
	Keyway 12"	3150.620	34.00 lf	31.00 /mh	53	4.00 /lf	143	-	-	-	-	-	-	196	217
	Orbal Reactor Basin Walls		98.02 cy		34,418		47,805	/cy					3,279	85,502	99,270
	Concrete Concrete				47,921		64,750						5,489	118,160	137,329
	400 Orbal Anaerobic Reactor				47,921		64,750	/LS					5,489	118,160	137,329
	550 UV and Digester Blower Building														
	Concrete Concrete														
	0302- UV Building Influent Box Base Slab at 25.96														
	5000 psi Concrete	3310.100	17.33 cy	-	-	165.00 /cy	3,060	-	-	-	-	-	-	3,060	3,060
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	17.33 cy	31.00 /mh	632	-	-	-	-	-	-	31.26 /cy	580	1,212	1,465
	Formwork S.O.G. Edge Form > 1'	3100.120	124.00 sf	31.00 /mh	1,230	1.50 /sf	195	-	-	-	-	-	-	1,425	1,917
	Finegrade Below Concrete	3150.650	234.00 sf	31.00 /mh	145	-	-	-	-	-	-	-	-	145	203
	Finish- Hard Trowel	3350.110	234.00 sf	31.00 /mh	102	/sf	-	-	-	-	-	-	-	102	142
	Liquid Curing Compounds	3390.170	234.00 sf	31.00 /mh	15	0.06 /sf	14	-	-	-	-	-	-	29	34
	Waterstop 6" Flat	3510.610	62.00 lf	31.00 /mh	192	5.00 /lf	326	-	-	-	-	-	-	518	595
	Oil SOG Form	3100.310	124.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	3	3
	Nails and Hardware	3150.200	124.00 sf	31.00 /mh	0	0.04 /sf	5	-	-	-	-	-	-	5	5
	Dimension Lumber	3150.200	124.00 sf	31.00 /mh	0	0.50 /sf	62	-	-	-	-	-	-	62	62
	UV Building Influent Box Base Slab at 25.96		17.33 cy		2,316		3,664	/cy					580	6,560	7,486
	0302- UV Channel Base Slab														
	5000 psi Concrete	3310.100	74.07 cy	-	-	165.00 /cy	13,078	-	-	-	-	-	-	13,078	13,078
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	74.07 cy	31.00 /mh	2,457	-	-	-	-	-	-	31.26 /cy	2,478	4,935	5,917
	Formwork S.O.G. Edge Form > 1'	3100.120	360.00 sf	31.00 /mh	3,571	1.50 /sf	567	-	-	-	-	-	-	4,138	5,567
	Formwork S.O.G. Const Joints > 1'	3100.120	40.00 sf	31.00 /mh	570	1.50 /sf	63	-	-	-	-	-	-	633	862
	CJ Prep Slab	3350.170	40.00 sf	31.00 /mh	31	0.15 /sf	6	-	-	-	-	-	-	37	49
	Finegrade Below Concrete	3150.650	1,000.00 sf	31.00 /mh	620	-	-	-	-	-	-	-	-	620	868
	Finish- Hard Trowel	3350.110	1,000.00 sf	31.00 /mh	434	/sf	-	-	-	-	-	-	-	434	608
	Liquid Curing Compounds	3390.170	1,000.00 sf	31.00 /mh	62	0.06 /sf	60	-	-	-	-	-	-	122	147
	Waterstop 6" Flat	3510.610	232.00 lf	31.00 /mh	719	5.00 /lf	1,218	-	-	-	-	-	-	1,937	2,225
	Keyway 4"	3150.620	12.00 lf	31.00 /mh	19	1.00 /lf	13	-	-	-	-	-	-	31	39
	Oil SOG Form	3100.310	400.00 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	360.00 sf	31.00 /mh	0	0.04 /sf	14	-	-	-	-	-	-	15	15
	Dimension Lumber	3150.200	360.00 sf	31.00 /mh	0	0.50 /sf	180	-	-	-	-	-	-	180	180
	UV Channel Base Slab		74.07 cy		8,484		15,207	/cy					2,478	26,168	29,562
	0302- UV Building Effluent Box Base Slab at 30.61														
	5000 psi Concrete	3310.100	4.89 cy	-	-	165.00 /cy	863	-	-	-	-	-	-	863	863
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	4.89 cy	31.00 /mh	243	-	-	-	-	-	-	31.26 /cy	164	407	504
	Formwork S.O.G. Edge Form > 1'	3100.120	57.00 sf	31.00 /mh	565	1.50 /sf	90	-	-	-	-	-	-	655	881
	Finegrade Below Concrete	3150.650	88.00 sf	31.00 /mh	55	-	-	-	-	-	-	-	-	55	76
	Finish- Hard Trowel	3350.110	88.00 sf	31.00 /mh	38	/sf	-	-	-	-	-	-	-	38	53
	Liquid Curing Compounds	3390.170	88.00 sf	31.00 /mh	5	0.06 /sf	5	-	-	-	-	-	-	11	13
	Waterstop 6" Flat	3510.610	38.00 lf	31.00 /mh	118	5.00 /lf	200	-	-	-	-	-	-	317	364
	Oil SOG Form	3100.310	57.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	57.00 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Dimension Lumber	3150.200	57.00 sf	31.00 /mh	0	0.50 /sf	29	-	-	-	-	-	-	29	29
	UV Building Effluent Box Base Slab at 30.61		4.89 cy		1,025		1,190	/cy					164	2,378	2,788
	0302- UV Basin Non Pot Base Slab elev 28.61														
	5000 psi Concrete	3310.100	7.00 cy	-	-	165.00 /cy	1,236	-	-	-	-	-	-	1,236	1,236
	Pump Place Slab on Grade	3310.230	7.00 cy	31.00 /mh	348	-	-	-	-	-	-	31.26 /cy	234	582	722
	Formwork S.O.G. Edge Form > 1'	3100.120	69.00 sf	31.00 /mh	684	1.50 /sf	109	-	-	-	-	-	-	793	1,067
	Finegrade Below Concrete	3150.650	126.00 sf	31.00 /mh	78	-	-	-	-	-	-	-	-	78	109
	Finish- Hard Trowel	3350.110	126.00 sf	31.00 /mh	55	/sf	-	-	-	-	-	-	-	55	77
	Liquid Curing Compounds	3390.170	126.00 sf	31.00 /mh	8	0.06 /sf	8	-	-	-	-	-	-	15	18
	Waterstop 6" Flat	3510.610	46.00 lf	31.00 /mh	143	5.00 /lf	242	-	-	-	-	-	-	384	441
	Oil SOG Form	3100.310	69.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	69.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	69.00 sf	31.00 /mh	0	0.50 /sf	35	-	-	-	-	-	-	35	35
	UV Basin Non Pot Base Slab elev 28.61		7.00 cy		1,316		1,632	/cy					234	3,182	3,709
	0302- UV Builidng Stem Wall Footing Pads														
	5000 psi Concrete	3310.100	18.56 cy	-	-	165.00 /cy	3,276	-	-	-	-	-	-	3,276	3,276
	Slab Placement Count	3310.360	12.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- UV Building Stem Wall Footing Pads														
	Pump Place Slab on Grade	3310.230	18.56 cy	31.00 /mh	492	-	-	-	-	-	-	31.26 /cy	621	1,113	1,310
	Formwork S.O.G. Edge Form > 1'	3100.120	400.80 sf	31.00 /mh	3,976	1.50 /sf	631	-	-	-	-	-	-	4,607	6,198
	Finegrade Below Concrete	3150.650	300.00 sf	31.00 /mh	186	-	-	-	-	-	-	-	-	186	260
	Finish- Hard Trowel	3350.110	300.00 sf	31.00 /mh	130	/sf	-	-	-	-	-	-	-	130	182
	Liquid Curing Compounds	3390.170	300.00 sf	31.00 /mh	19	0.06 /sf	18	-	-	-	-	-	-	37	44
	Oil SOG Form	3100.310	400.80 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	400.80 sf	31.00 /mh	0	0.04 /sf	16	-	-	-	-	-	-	16	16
	Dimension Lumber	3150.200	400.80 sf	31.00 /mh	0	0.50 /sf	200	-	-	-	-	-	-	201	201
	UV Building Stem Wall Footing Pads		18.56 cy		4,804		4,150	/cy					621	9,574	11,495
	0302- UV Building Main Level Slab														
	5000 psi Concrete	3310.100	138.67 cy	-	-	165.00 /cy	24,482	-	-	-	-	-	-	24,482	24,482
	Slab Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	138.67 cy	31.00 /mh	4,600	-	-	-	-	-	-	31.26 /cy	4,638	9,238	11,078
	Formwork S.O.G. Edge Form < 1'	3100.120	495.00 sf	31.00 /mh	4,910	1.50 /sf	780	-	-	-	-	-	-	5,690	7,654
	Formwork S.O.G. Const Joints < 1'	3100.120	108.00 sf	31.00 /mh	1,540	1.50 /sf	170	-	-	-	-	-	-	1,710	2,326
	CJ Prep Slab	3350.170	108.00 sf	31.00 /mh	84	0.15 /sf	16	-	-	-	-	-	-	100	133
	Finegrade Below Concrete	3150.650	3,744.00 sf	31.00 /mh	2,321	-	-	-	-	-	-	-	-	2,321	3,250
	Finish- Hard Trowel	3350.110	3,744.00 sf	31.00 /mh	1,625	/sf	-	-	-	-	-	-	-	1,625	2,275
	Liquid Curing Compounds	3390.170	3,744.00 sf	31.00 /mh	232	0.06 /sf	225	-	-	-	-	-	-	457	550
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	10 Mil. Vapor Barrier	3150.630	3,744.00 sf	31.00 /mh	232	0.15 /sf	618	-	-	-	-	-	-	850	943
	Oil SOG Form	3100.310	388.00 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	280.00 sf	31.00 /mh	0	0.04 /sf	11	-	-	-	-	-	-	11	11
	Dimension Lumber	3150.200	280.00 sf	31.00 /mh	0	0.50 /sf	140	-	-	-	-	-	-	140	140
	Shore Suspended Slab 0-15'	3100.124	80.00 sf	31.00 /mh	868	4.25 /sf	357	-	-	-	-	-	-	1,225	1,572
	UV Building Main Level Slab		138.67 cy		17,107		26,934	/cy					4,638	48,679	55,522
	0302- UV Building HVAC Slabs														
	5000 psi Concrete	3310.100	8.78 cy	-	-	165.00 /cy	1,550	-	-	-	-	-	-	1,550	1,550
	Slab Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Slab on Grade	3310.230	8.78 cy	31.00 /mh	349	-	-	-	-	-	-	-	-	349	489
	Formwork S.O.G. Edge Form > 1'	3100.120	120.00 sf	31.00 /mh	1,190	1.50 /sf	189	-	-	-	-	-	-	1,379	1,856
	Finegrade Below Concrete	3150.650	158.00 sf	31.00 /mh	98	-	-	-	-	-	-	-	-	98	137
	Finish- Hard Trowel	3350.110	158.00 sf	31.00 /mh	69	/sf	-	-	-	-	-	-	-	69	96
	Liquid Curing Compounds	3390.170	158.00 sf	31.00 /mh	10	0.06 /sf	9	-	-	-	-	-	-	19	23
	Chamfer 3/4"	3150.625	80.00 lf	31.00 /mh	124	0.20 /lf	17	-	-	-	-	-	-	141	190
	Oil SOG Form	3100.310	120.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	120.00 sf	31.00 /mh	0	0.04 /sf	5	-	-	-	-	-	-	5	5
	Dimension Lumber	3150.200	120.00 sf	31.00 /mh	0	0.50 /sf	60	-	-	-	-	-	-	60	60
	SOG Rebar	3210.104	1.10 tn	31.00 /mh	850	1,400.00 /tn	1,613	-	-	-	-	-	-	2,463	2,803
	UV Building HVAC Slabs		8.78 cy		2,690		3,445	/cy						6,135	7,212
	0302-B UV Channel Topping concrete flume fill and fill under eff flume														
	5000 psi Concrete	3310.100	20.44 cy	-	-	165.00 /cy	3,609	-	-	-	-	-	-	3,609	3,609
	Other Placement Count	3310.360	5.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Truck Place Slab on Grade	3310.230	20.44 cy	31.00 /mh	678	-	-	-	-	-	-	-	-	678	949
	Formwork S.O.G. Edge Form > 1'	3100.120	372.00 sf	31.00 /mh	3,690	1.50 /sf	586	-	-	-	-	-	-	4,276	5,752
	Finish- Hard Trowel	3350.110	196.00 sf	31.00 /mh	85	/sf	-	-	-	-	-	-	-	85	119
	Liquid Curing Compounds	3390.170	196.00 sf	31.00 /mh	12	0.06 /sf	12	-	-	-	-	-	-	24	29
	Blockouts in Concrete	3150.194	24.00 sf	31.00 /mh	260	2.00 /sf	48	-	-	-	-	-	-	308	413
	Waterstop Adeka or Swellstop	3510.610	50.00 lf	31.00 /mh	140	8.50 /lf	446	-	-	-	-	-	-	586	642
	Oil SOG Form	3100.310	372.00 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	372.00 sf	31.00 /mh	0	0.04 /sf	15	-	-	-	-	-	-	15	15
	Dimension Lumber	3150.200	372.00 sf	31.00 /mh	0	0.50 /sf	186	-	-	-	-	-	-	186	186
	CJ Prep Slab	3350.170	196.00 sf	31.00 /mh	152	0.15 /sf	29	-	-	-	-	-	-	181	242
	Form Special effluent flume	3150.200	1.00 ls	31.00 /mh	1,488	500.00 /ls	500	-	-	-	-	-	-	1,988	2,583
	UV Channel Topping concrete flume fill and fill under eff flume		20.44 cy		6,506		5,439	/cy						11,945	14,547
	0303- UV Building Influent Box Walls elev 25.96 to 29.61														
	Pump Place Walls	3310.260	11.11 cy	31.00 /mh	737	-	-	-	-	-	-	31.26 /cy	372	1,109	1,404
	5000 psi Concrete	3310.100	11.11 cy	-	-	165.00 /cy	1,962	-	-	-	-	-	-	1,962	1,962
	Wall Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Rented Form System 0-4'	3100.180	400.00 sf	31.00 /mh	3,968	1.50 /sf	630	-	-	-	-	-	-	4,598	6,185
	CJ Prep Walls	3350.170	75.00 sf	31.00 /mh	58	0.15 /sf	11	-	-	-	-	-	-	69	93
	Finish- Top of Wall	3350.110	75.00 sf	31.00 /mh	33	/sf	-	-	-	-	-	-	-	33	46
	Liquid Curing Walls	3390.170	475.00 sf	31.00 /mh	15	0.06 /sf	29	-	-	-	-	-	-	43	49
	Grind/Patch Walls	3350.130	400.00 sf	31.00 /mh	149	0.05 /sf	20	-	-	-	-	-	-	169	228
	Waterstop 6" Flat	3510.610	50.00 lf	31.00 /mh	155	5.00 /lf	263	-	-	-	-	-	-	418	480
	Oil Wall Forms	3100.310	400.00 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	400.00 sf	31.00 /mh	0	0.04 /sf	16	-	-	-	-	-	-	16	16
	Form Ties 18"	3150.632	100.00 ea	31.00 /mh	0	2.55 /ea	255	-	-	-	-	-	-	255	255
	Dimension Lumber	3150.200	400.00 sf	31.00 /mh	0	0.50 /sf	200	-	-	-	-	-	-	200	200
	Rebar Templates	3200.980	50.00 lf	31.00 /mh	78	0.50 /lf	25	-	-	-	-	-	-	103	134

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	UV Building Influent Box Walls elev 25.96 to 29.61		11.11 cy		5,192		3,418	/cy					372	8,982	11,059
0303-	UV Building Non pot bottom walls														
	Crane Place Walls	3310.260	2.22 cy	31.00 /mh	147	-	-	-	-	-	-	-	-	147	206
	5000 psi Concrete	3310.100	2.22 cy	-	-	165.00 /cy	392	-	-	-	-	-	-	392	392
	Job Built with Plyform 0-4'	3100.180	80.00 sf	31.00 /mh	620	1.50 /sf	126	-	-	-	-	-	-	746	994
	CJ Prep Walls	3350.170	60.00 sf	31.00 /mh	47	0.15 /sf	9	-	-	-	-	-	-	56	74
	Finish- Top of Wall	3350.110	60.00 sf	31.00 /mh	26	/sf		-	-	-	-	-	-	26	36
	Liquid Curing Walls	3390.170	140.00 sf	31.00 /mh	4	0.06 /sf	8	-	-	-	-	-	-	13	14
	Grind/Patch Walls	3350.130	80.00 sf	31.00 /mh	30	0.05 /sf	4	-	-	-	-	-	-	34	46
	Waterstop 6" Flat	3510.610	40.00 lf	31.00 /mh	124	5.00 /lf	210	-	-	-	-	-	-	334	384
	Oil Wall Forms	3100.310	80.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	80.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties 18"	3150.632	20.00 ea	31.00 /mh	0	2.55 /ea	51	-	-	-	-	-	-	51	51
	Dimension Lumber	3150.200	80.00 sf	31.00 /mh	0	0.50 /sf	40	-	-	-	-	-	-	40	40
	Rebar Templates	3200.980	40.00 lf	31.00 /mh	62	0.50 /lf	20	-	-	-	-	-	-	82	107
	UV Building Non pot bottom walls		2.22 cy		1,060		866	/cy						1,926	2,350
0303-	UV Building UV Channel Walls														
	Pump Place Walls	3310.260	106.30 cy	31.00 /mh	2,821	-	-	-	-	-	-	31.26 /cy	3,555	6,376	7,504
	5000 psi Concrete	3310.100	106.30 cy	-	-	165.00 /cy	18,767	-	-	-	-	-	-	18,767	18,767
	Wall Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Job Built with Plyform 4-8'	3100.180	4,480.00 sf	31.00 /mh	27,776	1.50 /sf	7,056	-	-	-	-	-	-	34,832	45,942
	Wall Bulkhead Forms	3150.192	70.00 sf	31.00 /mh	998	1.50 /sf	110	-	-	-	-	-	-	1,108	1,508
	CJ Prep Walls	3350.170	480.00 sf	31.00 /mh	372	0.15 /sf	72	-	-	-	-	-	-	444	593
	Finish- Top of Wall	3350.110	410.00 sf	31.00 /mh	178	/sf		-	-	-	-	-	-	178	249
	Liquid Curing Walls	3390.170	4,890.00 sf	31.00 /mh	152	0.06 /sf	293	-	-	-	-	-	-	445	506
	Grind/Patch Walls	3350.130	4,480.00 sf	31.00 /mh	1,667	0.05 /sf	224	-	-	-	-	-	-	1,891	2,557
	Blockouts in Concrete	3150.194	152.00 sf	31.00 /mh	1,649	2.00 /sf	304	-	-	-	-	-	-	1,953	2,613
	Waterstop 6" Flat	3510.610	376.00 lf	31.00 /mh	1,166	5.00 /lf	1,974	-	-	-	-	-	-	3,140	3,606
	Rub Walls	3350.140	1,600.00 sf	31.00 /mh	1,984	0.15 /sf	240	-	-	-	-	-	-	2,224	3,018
	Oil Wall Forms	3100.310	4,480.00 sf	31.00 /mh	1	0.02 /sf	90	-	-	-	-	-	-	91	92
	Nails and Hardware	3150.200	4,480.00 sf	31.00 /mh	1	0.04 /sf	179	-	-	-	-	-	-	181	181
	Form Ties 12"	3150.632	490.00 ea	31.00 /mh	0	2.35 /ea	1,152	-	-	-	-	-	-	1,152	1,152
	Form Ties 18"	3150.632	630.00 ea	31.00 /mh	0	2.55 /ea	1,607	-	-	-	-	-	-	1,607	1,607
	Dimension Lumber	3150.200	4,480.00 sf	31.00 /mh	1	0.50 /sf	2,240	-	-	-	-	-	-	2,241	2,242
	Rebar Templates	3200.980	320.00 lf	31.00 /mh	496	0.50 /lf	160	-	-	-	-	-	-	656	854
	Waterstop Fittings	3510.610	24.00 ea	31.00 /mh	1,488	55.00 /ea	1,386	-	-	-	-	-	-	2,874	3,469
	Grout Slurry Bottom of Walls	3150.200	150.00 cf	31.00 /mh	1,163	15.00 /cf	2,250	-	-	-	-	-	-	3,413	3,877
	UV Building UV Channel Walls		106.30 cy		41,913		38,103	/cy					3,555	83,571	100,336
0303-	UV Building Stem Walls														
	Pump Place Walls	3310.260	42.89 cy	31.00 /mh	1,423	-	-	-	-	-	-	31.26 /cy	1,435	2,857	3,426
	5000 psi Concrete	3310.100	42.89 cy	-	-	165.00 /cy	7,572	-	-	-	-	-	-	7,572	7,572
	Wall Placement Count	3310.360	8.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Job Built with Plyform 0-4'	3100.180	1,668.00 sf	31.00 /mh	12,927	1.50 /sf	2,627	-	-	-	-	-	-	15,554	20,725
	Wall Pilaster Forms	3150.192	324.00 sf	31.00 /mh	2,511	1.50 /sf	510	-	-	-	-	-	-	3,021	4,026
	Wall Bulkhead Forms	3150.192	12.00 sf	31.00 /mh	171	1.50 /sf	19	-	-	-	-	-	-	190	258
	CJ Prep Walls	3350.170	290.00 sf	31.00 /mh	225	0.15 /sf	44	-	-	-	-	-	-	268	358
	Finish- Top of Wall	3350.110	278.00 sf	31.00 /mh	121	/sf		-	-	-	-	-	-	121	169
	Liquid Curing Walls	3390.170	2,270.00 sf	31.00 /mh	70	0.06 /sf	136	-	-	-	-	-	-	207	235
	Grind/Patch Walls	3350.130	1,992.00 sf	31.00 /mh	741	0.05 /sf	100	-	-	-	-	-	-	841	1,137
	Oil Wall Forms	3100.310	1,992.00 sf	31.00 /mh	1	0.02 /sf	40	-	-	-	-	-	-	40	41
	Nails and Hardware	3150.200	1,992.00 sf	31.00 /mh	1	0.04 /sf	80	-	-	-	-	-	-	80	81
	Form Ties 12"	3150.632	417.00 ea	31.00 /mh	0	2.35 /ea	980	-	-	-	-	-	-	980	980
	Form Ties Specialty	3150.632	36.00 ea	31.00 /mh	223	5.00 /ea	180	-	-	-	-	-	-	403	492
	Dimension Lumber	3150.200	1,992.00 sf	31.00 /mh	1	0.50 /sf	996	-	-	-	-	-	-	997	997
	Rebar Templates	3200.980	278.00 lf	31.00 /mh	431	0.50 /lf	139	-	-	-	-	-	-	570	742
	UV Building Stem Walls		42.89 cy		18,845		13,422	/cy					1,435	33,701	41,239
0303-	UV Building Curb for PEMB														
	Pump Place Walls	3310.260	15.72 cy	31.00 /mh	2,085	-	-	-	-	-	-	31.26 /cy	526	2,611	3,445
	5000 psi Concrete	3310.100	15.72 cy	-	-	165.00 /cy	2,775	-	-	-	-	-	-	2,775	2,775
	Wall Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Job Built with Plyform 0-4'	3100.180	529.30 sf	31.00 /mh	4,102	1.50 /sf	834	-	-	-	-	-	-	4,936	6,577
	Wall Pilaster Forms	3150.192	72.36 sf	31.00 /mh	561	1.50 /sf	114	-	-	-	-	-	-	675	899
	Wall Bulkhead Forms	3150.192	10.69 sf	31.00 /mh	152	1.50 /sf	17	-	-	-	-	-	-	169	230
	CJ Prep Walls	3350.170	536.04 sf	31.00 /mh	415	0.15 /sf	80	-	-	-	-	-	-	496	662
	Finish- Top of Wall	3350.110	525.35 sf	31.00 /mh	228	/sf		-	-	-	-	-	-	228	319
	Liquid Curing Walls	3390.170	1,127.01 sf	31.00 /mh	35	0.06 /sf	68	-	-	-	-	-	-	103	117
	Grind/Patch Walls	3350.130	601.66 sf	31.00 /mh	224	0.05 /sf	30	-	-	-	-	-	-	254	343
	Chamfer 3/4"	3150.625	990.00 lf	31.00 /mh	1,535	0.20 /lf	208	-	-	-	-	-	-	1,742	2,356
	Rub Walls	3350.140	990.00 sf	31.00 /mh	1,228	0.15 /sf	149	-	-	-	-	-	-	1,376	1,867
	Oil Wall Forms	3100.310	601.66 sf	31.00 /mh	0	0.02 /sf	12	-	-	-	-	-	-	12	12
	Nails and Hardware	3150.200	601.66 sf	31.00 /mh	0	0.04 /sf	24	-	-	-	-	-	-	24	24
	Form Ties 16"	3150.632	132.33 ea	31.00 /mh	0	2.50 /ea	331	-	-	-	-	-	-	331	331

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- UV Building Curb for PEMB														
	Form Ties Specialty	3150.632	8.04 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	110
	Dimension Lumber	3150.200	601.66 sf	31.00 /mh	0	0.50 /sf	301	-	-	-	-	-	-	301	301
	Rebar Templates	3200.980	395.00 lf	31.00 /mh	612	0.50 /lf	198	-	-	-	-	-	-	810	1,055
	Drill and Epoxy #5	3210.101	990.00 ea	31.00 /mh	9,207	5.00 /ea	5,198	-	-	-	-	-	-	14,405	18,087
	UV Building Curb for PEMB		15.72 cy		20,435		10,377	/cy					526	31,337	39,511
	0310- UV Building Blower Room Equip Pads														
	Equipment Pad Form 8"	3100.164	54.94 sf	31.00 /mh	562	1.50 /sf	87	-	-	-	-	-	-	649	873
	Oil Equipment Pad Form	3100.310	54.94 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	5000 psi Concrete	3310.100	5.91 cy	-	-	165.00 /cy	1,043	-	-	-	-	-	-	1,043	1,043
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	5.91 cy	31.00 /mh	588	-	-	-	-	-	-	-	-	588	823
	Liquid Curing Compounds	3390.170	238.00 sf	31.00 /mh	15	0.06 /sf	14	-	-	-	-	-	-	29	35
	Finish- Hard Trowel	3350.110	238.00 sf	31.00 /mh	103	/sf		-	-	-	-	-	-	103	145
	Chamfer	3150.625	84.00 lf	31.00 /mh	39	0.20 /lf	18	-	-	-	-	-	-	56	72
	Misc. Pad Rebar	3210.104	0.74 tn	31.00 /mh	572	1,400.00 /tn	1,085	-	-	-	-	-	-	1,657	1,886
	Nails and Hardware	3150.200	54.94 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Drill and Epoxy #4	3210.101	84.00 ea	31.00 /mh	521	4.00 /ea	353	-	-	-	-	-	-	874	1,082
	UV Building Blower Room Equip Pads		5.91 cy		2,399		2,602	/cy						5,002	5,961
	0310- UV Building Electric Room Equipment Pads														
	Equipment Pad Form 6"	3100.164	100.00 sf	31.00 /mh	1,023	1.50 /sf	158	-	-	-	-	-	-	1,181	1,590
	Oil Equipment Pad Form	3100.310	100.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	5000 psi Concrete	3310.100	4.96 cy	-	-	165.00 /cy	876	-	-	-	-	-	-	876	876
	Buggy Place Equipment Pads	3310.300	4.96 cy	31.00 /mh	658	-	-	-	-	-	-	-	-	658	922
	Liquid Curing Compounds	3390.170	268.00 sf	31.00 /mh	17	0.06 /sf	16	-	-	-	-	-	-	33	39
	Finish- Hard Trowel	3350.110	268.00 sf	31.00 /mh	116	/sf		-	-	-	-	-	-	116	163
	Chamfer	3150.625	156.00 lf	31.00 /mh	72	0.20 /lf	33	-	-	-	-	-	-	105	134
	Misc. Pad Rebar	3210.104	0.62 tn	31.00 /mh	481	1,400.00 /tn	911	-	-	-	-	-	-	1,392	1,584
	Nails and Hardware	3150.200	100.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Drill and Epoxy #4	3210.101	208.00 ea	31.00 /mh	1,290	4.00 /ea	874	-	-	-	-	-	-	2,163	2,679
	UV Building Electric Room Equipment Pads		4.96 cy		3,657		2,873	/cy						6,530	7,993
	0310- UV Building Misc Equipment pads not blower or elect														
	Equipment Pad Form 6"	3100.164	50.00 sf	31.00 /mh	512	1.50 /sf	79	-	-	-	-	-	-	590	795
	Oil Equipment Pad Form	3100.310	50.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	5000 psi Concrete	3310.100	2.32 cy	-	-	165.00 /cy	409	-	-	-	-	-	-	409	409
	Other Placement Count	3310.360	5.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	2.32 cy	31.00 /mh	307	-	-	-	-	-	-	-	-	307	430
	Liquid Curing Compounds	3390.170	125.00 sf	31.00 /mh	8	0.06 /sf	8	-	-	-	-	-	-	15	18
	Finish- Hard Trowel	3350.110	125.00 sf	31.00 /mh	54	/sf		-	-	-	-	-	-	54	76
	Chamfer	3150.625	110.00 lf	31.00 /mh	51	0.20 /lf	23	-	-	-	-	-	-	74	94
	Misc. Pad Rebar	3210.104	0.29 tn	31.00 /mh	224	1,400.00 /tn	424	-	-	-	-	-	-	648	738
	Nails and Hardware	3150.200	50.00 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Drill and Epoxy #4	3210.101	110.00 ea	31.00 /mh	682	4.00 /ea	462	-	-	-	-	-	-	1,144	1,417
	UV Building Misc Equipment pads not blower or elect		2.32 cy		1,837		1,407	/cy						3,245	3,980
	Concrete Concrete				139,585		134,729						14,601	288,915	344,749
	550 UV and Digester Blower Building				139,585		134,729	/LS					14,601	288,915	344,749
	600 Aerobic Digester 5 and 6														
	Concrete Concrete														
	0302- Digester 5 and 6 Base Slab														
	5000 psi Concrete	3310.100	151.56 cy	-	-	165.00 /cy	26,758	-	-	-	-	-	-	26,758	26,758
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	151.56 cy	31.00 /mh	3,268	-	-	-	-	-	-	31.26 /cy	5,070	8,337	9,644
	Formwork S.O.G. Edge Form > 1'	3100.120	338.12 sf	31.00 /mh	3,354	1.50 /sf	533	-	-	-	-	-	-	3,887	5,228
	Formwork S.O.G. Const Joints > 1'	3100.120	58.46 sf	31.00 /mh	834	1.50 /sf	92	-	-	-	-	-	-	926	1,259
	CJ Prep Slab	3350.170	58.46 sf	31.00 /mh	45	0.15 /sf	9	-	-	-	-	-	-	54	72
	Finegrade Below Concrete	3150.650	2,590.00 sf	31.00 /mh	1,606	-	-	-	-	-	-	-	-	1,606	2,248
	Finish- Hard Trowel	3350.110	2,590.00 sf	31.00 /mh	1,124	/sf		-	-	-	-	-	-	1,124	1,574
	Liquid Curing Compounds	3390.170	2,590.00 sf	31.00 /mh	161	0.06 /sf	155	-	-	-	-	-	-	316	380
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	Waterstop 6" Flat	3510.610	282.00 lf	31.00 /mh	874	5.00 /lf	1,481	-	-	-	-	-	-	2,355	2,704
	Oil SOG Form	3100.310	396.58 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	338.12 sf	31.00 /mh	0	0.04 /sf	14	-	-	-	-	-	-	14	14
	Dimension Lumber	3150.200	338.12 sf	31.00 /mh	0	0.50 /sf	169	-	-	-	-	-	-	169	169
	Waterstop Fittings	3510.610	10.00 ea	31.00 /mh	28	55.00 /ea	578	-	-	-	-	-	-	605	617
	Digester 5 and 6 Base Slab		151.56 cy		11,988		29,924	/cy					5,070	46,981	51,777
	0302- Digester 5 and 6 sump base slab														
	5000 psi Concrete	3310.100	11.24 cy	-	-	165.00 /cy	1,984	-	-	-	-	-	-	1,984	1,984
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	11.24 cy	31.00 /mh	373	-	-	-	-	-	-	31.26 /cy	376	749	898
	Formwork S.O.G. Edge Form > 1'	3100.120	88.48 sf	31.00 /mh	878	1.50 /sf	139	-	-	-	-	-	-	1,017	1,368
	Finegrade Below Concrete	3150.650	192.00 sf	31.00 /mh	119	-	-	-	-	-	-	-	-	119	167

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302-	Digester 5 and 6 sump base slab														
	Finish- Hard Trowel	3350.110	192.00 sf	31.00 /mh	83	/sf		-	-	-	-	-	-	83	117
	Liquid Curing Compounds	3390.170	192.00 sf	31.00 /mh	12	0.06 /sf	12	-	-	-	-	-	-	23	28
	Waterstop 6" Flat	3510.610	56.00 lf	31.00 /mh	156	5.00 /lf	294	-	-	-	-	-	-	450	513
	Oil SOG Form	3100.310	88.48 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	88.48 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	88.48 sf	31.00 /mh	0	0.50 /sf	44	-	-	-	-	-	-	44	44
	Digester 5 and 6 sump base slab		11.24 cy		1,621		2,478	/cy					376	4,475	5,124
0302-	Digester 5 and 6 stair pads 2 ea														
	5000 psi Concrete	3310.100	2.67 cy	-	-	165.00 /cy	471	-	-	-	-	-	-	471	471
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Slab on Grade	3310.230	2.67 cy	31.00 /mh	177	-	-	-	-	-	-	-	-	177	248
	Formwork S.O.G. Edge Form > 1'	3100.120	60.00 sf	31.00 /mh	595	1.50 /sf	95	-	-	-	-	-	-	690	928
	Finegrade Below Concrete	3150.650	48.00 sf	31.00 /mh	30	-	-	-	-	-	-	-	-	30	42
	Finish- Hard Trowel	3350.110	48.00 sf	31.00 /mh	21	/sf		-	-	-	-	-	-	21	29
	Liquid Curing Compounds	3390.170	48.00 sf	31.00 /mh	3	0.06 /sf	3	-	-	-	-	-	-	6	7
	Oil SOG Form	3100.310	60.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	60.00 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Dimension Lumber	3150.200	60.00 sf	31.00 /mh	0	0.50 /sf	30	-	-	-	-	-	-	30	30
	Digester 5 and 6 stair pads 2 ea		2.67 cy		826		602	/cy						1,428	1,758
0302-	Digester 5 and 6 meter vault Base slab for precast														
	5000 psi Concrete	3310.100	2.00 cy	-	-	165.00 /cy	353	-	-	-	-	-	-	353	353
	Crane Place Slab on Grade	3310.230	2.00 cy	31.00 /mh	100	-	-	-	-	-	-	-	-	100	139
	Formwork S.O.G. Edge Form < 1'	3100.120	24.00 sf	31.00 /mh	238	1.50 /sf	38	-	-	-	-	-	-	276	371
	Finegrade Below Concrete	3150.650	36.00 sf	31.00 /mh	22	-	-	-	-	-	-	-	-	22	31
	Finish- Hard Trowel	3350.110	36.00 sf	31.00 /mh	16	/sf		-	-	-	-	-	-	16	22
	Liquid Curing Compounds	3390.170	36.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Keyway 4"	3150.620	20.00 lf	31.00 /mh	155	1.00 /lf	21	-	-	-	-	-	-	176	238
	Oil SOG Form	3100.310	24.00 sf	31.00 /mh	0	0.02 /sf	0	-	-	-	-	-	-	0	0
	Nails and Hardware	3150.200	24.00 sf	31.00 /mh	0	0.04 /sf	1	-	-	-	-	-	-	1	1
	Dimension Lumber	3150.200	24.00 sf	31.00 /mh	0	0.50 /sf	12	-	-	-	-	-	-	12	12
	Digester 5 and 6 meter vault Base slab for precast		2.00 cy		533		428	/cy						960	1,173
0302-B	Digester 5 and 6 sloped topping concrete														
	5500 psi Concrete	3310.100	45.33 cy	-	-	195.00 /cy	9,459	-	-	-	-	-	-	9,459	9,459
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Slab on Grade	3310.230	45.33 cy	31.00 /mh	3,007	-	-	-	-	-	-	-	-	3,007	4,210
	Formwork S.O.G. Edge Form < 1'	3100.120	32.00 sf	31.00 /mh	248	1.50 /sf	50	-	-	-	-	-	-	298	398
	Finish- Hard Trowel	3350.110	2,448.00 sf	31.00 /mh	1,062	/sf		-	-	-	-	-	-	1,062	1,487
	Liquid Curing Compounds	3390.170	2,448.00 sf	31.00 /mh	152	0.06 /sf	147	-	-	-	-	-	-	299	359
	Blockouts in Concrete	3150.194	16.00 sf	31.00 /mh	174	2.00 /sf	32	-	-	-	-	-	-	206	275
	Oil SOG Form	3100.310	104.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Nails and Hardware	3150.200	104.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	4	4
	Dimension Lumber	3150.200	104.00 sf	31.00 /mh	0	0.50 /sf	52	-	-	-	-	-	-	52	52
	CJ Prep Slab	3350.170	2,448.00 sf	31.00 /mh	1,897	0.15 /sf	367	-	-	-	-	-	-	2,264	3,023
	Grout topping fibers	3310.110	46.00 cy	-	-	25.00 /cy	1,231	-	-	-	-	-	-	1,231	1,231
	Digester 5 and 6 sloped topping concrete		45.33 cy		6,540		11,344	/cy						17,884	20,501
0303-	Digester 5 and 6 Walls														
	Pump Place Walls	3310.260	240.39 cy	31.00 /mh	7,974	-	-	-	-	-	-	31.26 /cy	8,040	16,014	19,203
	5000 psi Concrete	3310.100	240.39 cy	-	-	165.00 /cy	42,440	-	-	-	-	-	-	42,440	42,440
	Wall Placement Count	3310.360	6.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Gang Form System 16'->	3100.180	9,760.00 sf	31.00 /mh	45,384	2.50 /sf	25,620	-	-	-	-	-	-	71,004	89,158
	Wall Bulkhead Forms	3150.192	212.80 sf	31.00 /mh	3,035	1.50 /sf	335	-	-	-	-	-	-	3,370	4,584
	CJ Prep Walls	3350.170	537.32 sf	31.00 /mh	416	0.15 /sf	81	-	-	-	-	-	-	497	664
	Finish- Top of Wall	3350.110	324.52 sf	31.00 /mh	141	/sf		-	-	-	-	-	-	141	197
	Liquid Curing Walls	3390.170	10,084.52 sf	31.00 /mh	313	0.06 /sf	605	-	-	-	-	-	-	918	1,043
	Grind/Patch Walls	3350.130	9,760.00 sf	31.00 /mh	3,631	0.05 /sf	488	-	-	-	-	-	-	4,119	5,571
	Blockouts in Concrete	3150.194	96.00 sf	31.00 /mh	1,042	2.00 /sf	192	-	-	-	-	-	-	1,234	1,650
	Waterstop 6" Flat	3510.610	404.00 lf	31.00 /mh	1,252	5.00 /lf	2,121	-	-	-	-	-	-	3,373	3,874
	Rub Walls	3350.140	3,416.00 sf	31.00 /mh	4,236	0.15 /sf	512	-	-	-	-	-	-	4,748	6,443
	Oil Wall Forms	3100.310	9,760.00 sf	31.00 /mh	3	0.02 /sf	195	-	-	-	-	-	-	198	199
	Nails and Hardware	3150.200	9,760.00 sf	31.00 /mh	3	0.04 /sf	390	-	-	-	-	-	-	393	395
	Form Ties 16"	3150.632	2,440.00 ea	31.00 /mh	1	2.50 /ea	6,100	-	-	-	-	-	-	6,101	6,101
	Dimension Lumber	3150.200	9,760.00 sf	31.00 /mh	3	0.50 /sf	4,880	-	-	-	-	-	-	4,883	4,884
	Rebar Templates	3200.980	244.00 lf	31.00 /mh	378	0.50 /lf	122	-	-	-	-	-	-	500	651
	Waterstop Fittings	3510.610	12.00 ea	31.00 /mh	744	55.00 /ea	693	-	-	-	-	-	-	1,437	1,735
	Bonding agent and CJ prep Tie holes	3350.130	813.00 ea	31.00 /mh	3,780	2.00 /ea	1,626	-	-	-	-	-	-	5,406	6,919
	Grout Slurry Bottom of Walls	3150.200	108.00 cf	31.00 /mh	837	15.00 /cf	1,620	-	-	-	-	-	-	2,457	2,792
	Digester 5 and 6 Walls		240.39 cy		73,172		88,021	/cy					8,040	169,233	198,502
0304-	Digester 5 and 6 Elevated Deck														
	5000 psi Concrete	3310.100	90.67 cy	-	-	165.00 /cy	16,007	-	-	-	-	-	-	16,007	16,007
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Suspended Slab	3310.240	90.67 cy	31.00 /mh	3,007	-	-	-	-	-	-	-	-	3,007	4,210

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0304- Digester 5 and 6 Elevated Deck														
	Shore Suspended Slab 15-up	3100.124	2,448.00 sf	31.00 /mh	26,561	4.25 /sf	10,924	-	-	-	-	-	-	37,485	48,109
	Slab Edge Form < 1'	3100.124	270.00 sf	31.00 /mh	3,767	2.00 /sf	567	-	-	-	-	-	-	4,334	5,840
	Suspended Slab Const Joint	3100.124	36.00 sf	31.00 /mh	391	1.50 /sf	54	-	-	-	-	-	-	445	601
	CJ Prep Elevated Slab CJ	3350.170	36.00 sf	31.00 /mh	28	0.20 /sf	7	-	-	-	-	-	-	35	46
	Finish- Hard Trowel	3350.110	2,448.00 sf	31.00 /mh	1,062	/sf		-	-	-	-	-	-	1,062	1,487
	Liquid Curing Compounds	3390.170	2,448.00 sf	31.00 /mh	152	0.06 /sf	147	-	-	-	-	-	-	299	359
	Grind and Patch Deck Bottom	3350.130	2,448.00 sf	31.00 /mh	911	0.05 /sf	122	-	-	-	-	-	-	1,033	1,397
	Blockouts in Concrete	3150.194	96.00 sf	31.00 /mh	1,042	2.00 /sf	192	-	-	-	-	-	-	1,234	1,650
	Chamfer 3/4"	3150.625	320.00 lf	31.00 /mh	496	0.20 /lf	67	-	-	-	-	-	-	563	762
	Oil Suspended Slab Frm	3100.310	2,448.00 sf	31.00 /mh	1	0.02 /sf	49	-	-	-	-	-	-	50	50
	Nails and Hardware	3150.200	2,448.00 sf	31.00 /mh	1	0.04 /sf	98	-	-	-	-	-	-	99	99
	Rub Slab Bottom	3350.140	2,448.00 sf	31.00 /mh	2,277	0.12 /sf	294	-	-	-	-	-	-	2,570	3,481
	Digester 5 and 6 Elevated Deck		90.67 cy		39,694		28,529	/cy						68,223	84,100
	0305- Digester 5 and 6 Elevated Deck Beams														
	5000 psi Concrete	3310.100	48.00 cy	-	-	165.00 /cy	8,474	-	-	-	-	-	-	8,474	8,474
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Beams	3310.280	48.00 cy	31.00 /mh	1,592	-		-	-	-	-	-	-	1,592	2,229
	Beam Side Forms	3100.140	864.00 sf	31.00 /mh	10,714	1.50 /sf	1,361	-	-	-	-	-	-	12,074	16,360
	Beam Bottom Forms	3100.140	1,152.00 sf	31.00 /mh	12,499	4.25 /sf	5,141	-	-	-	-	-	-	17,640	22,640
	Grind/Patch Beams	3350.130	1,296.00 sf	31.00 /mh	599	0.05 /sf	65	-	-	-	-	-	-	663	903
	Chamfer 3/4"	3150.625	288.00 lf	31.00 /mh	446	0.20 /lf	60	-	-	-	-	-	-	507	685
	Rub Beams	3350.140	1,296.00 sf	31.00 /mh	1,205	0.12 /sf	156	-	-	-	-	-	-	1,361	1,843
	Oil Beam Forms	3100.310	1,296.00 sf	31.00 /mh	0	0.02 /sf	26	-	-	-	-	-	-	26	26
	Nails and Hardware	3150.200	1,296.00 sf	31.00 /mh	0	0.04 /sf	52	-	-	-	-	-	-	52	52
	Digester 5 and 6 Elevated Deck Beams		48.00 cy		27,056		15,335	/cy						42,391	53,213
	0306- Pipe Support columns Digester 5 and 6 4 ea														
	5000 psi Concrete	3310.100	2.00 cy	-	-	165.00 /cy	353	-	-	-	-	-	-	353	353
	Other Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Piers & Columns	3310.270	2.00 cy	31.00 /mh	133	-		-	-	-	-	-	-	133	186
	Formwork Sonotube 16"	3100.112	20.00 lf	31.00 /mh	310	6.00 /lf	126	-	-	-	-	-	-	436	560
	Liquid Curing Compounds	3390.170	83.78 sf	31.00 /mh	5	0.06 /sf	5	-	-	-	-	-	-	10	12
	Grind/Patch Columns	3350.130	16.76 sf	31.00 /mh	8	0.05 /sf	1	-	-	-	-	-	-	9	12
	Rub Columns	3350.140	16.76 sf	31.00 /mh	16	0.12 /sf	2	-	-	-	-	-	-	18	24
	Dimension Lumber	3150.200	83.78 sf	31.00 /mh	0	0.50 /sf	42	-	-	-	-	-	-	42	42
	Bobcat Skid Steer with post hole attach	1900.131	0.25 mnth	-	-	-	-	-	-	4,000.00 /mnth	1,000	2,000.00 /mnth	500	1,500	1,520
	Pipe Support columns Digester 5 and 6 4 ea		2.00 cy		471		529	/cy			1,000		500	2,500	2,709
	Concrete Concrete				161,901		177,188				1,000		13,986	354,076	418,856
	600 Aerobic Digester 5 and 6				161,901		177,188	/LS			1,000		13,986	354,076	418,856
	650 Existing Digester 1 to 4														
	Concrete Concrete														
	0302- Digester 3 and 4 manhole base slab														
	5000 psi Concrete	3310.100	2.37 cy	-	-	165.00 /cy	418	-	-	-	-	-	-	418	418
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Slab on Grade	3310.230	2.37 cy	31.00 /mh	157	-		-	-	-	-	-	-	157	220
	Formwork S.O.G. Edge Form < 1'	3100.120	32.00 sf	31.00 /mh	317	1.50 /sf	50	-	-	-	-	-	-	368	495
	Finegrade Below Concrete	3150.650	64.00 sf	31.00 /mh	40	-		-	-	-	-	-	-	40	56
	Finish- Hard Trowel	3350.110	64.00 sf	31.00 /mh	28	/sf		-	-	-	-	-	-	28	39
	Liquid Curing Compounds	3390.170	64.00 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	8	9
	Keyway 4"	3150.620	32.00 lf	31.00 /mh	50	1.00 /lf	34	-	-	-	-	-	-	83	103
	Road Base Below Concrete	2305.300	2.37 cy	31.00 /mh	37	22.00 /ton	103	-	-	-	-	-	-	140	155
	Oil SOG Form	3100.310	32.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	32.00 sf	31.00 /mh	0	0.04 /sf	1	-	-	-	-	-	-	1	1
	Dimension Lumber	3150.200	32.00 sf	31.00 /mh	0	0.50 /sf	16	-	-	-	-	-	-	16	16
	SOG Rebar	3210.104	0.30 tn	31.00 /mh	229	1,400.00 /tn	435	-	-	-	-	-	-	665	757
	Digester 3 and 4 manhole base slab		2.37 cy		862		1,063	/cy						1,925	2,269
	0304- Digester 1 and 2 Elevated Deck														
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	5000 psi Concrete	3310.100	44.52 cy	-	-	165.00 /cy	7,860	-	-	-	-	-	-	7,860	7,860
	Pump Place Suspended Slab	3310.240	44.52 cy	31.00 /mh	1,477	-		-	-	-	-	31.26 /cy	1,489	2,966	3,556
	Shore Suspended Slab 15-up	3100.124	1,202.01 sf	31.00 /mh	13,042	4.25 /sf	5,364	-	-	-	-	-	-	18,406	23,622
	Slab Edge Form < 1'	3100.124	140.00 sf	31.00 /mh	2,170	2.00 /sf	294	-	-	-	-	-	-	2,464	3,332
	Finish- Hard Trowel	3350.110	1,202.01 sf	31.00 /mh	522	/sf		-	-	-	-	-	-	522	730
	Liquid Curing Compounds	3390.170	1,202.01 sf	31.00 /mh	75	0.06 /sf	72	-	-	-	-	-	-	147	176
	Grind and Patch Deck Bottom	3350.130	1,202.01 sf	31.00 /mh	447	0.05 /sf	60	-	-	-	-	-	-	507	686
	Blockouts in Concrete	3150.194	96.00 sf	31.00 /mh	1,042	2.00 /sf	192	-	-	-	-	-	-	1,234	1,650
	Waterstop Adeka or Swellstop	3510.610	175.00 lf	31.00 /mh	543	8.50 /lf	1,562	-	-	-	-	-	-	2,104	2,321
	Chamfer 3/4"	3150.625	140.00 lf	31.00 /mh	217	0.20 /lf	29	-	-	-	-	-	-	246	333
	Oil Suspended Slab Frm	3100.310	1,202.01 sf	31.00 /mh	0	0.02 /sf	24	-	-	-	-	-	-	24	25
	Nails and Hardware	3150.200	1,202.01 sf	31.00 /mh	0	0.04 /sf	48	-	-	-	-	-	-	48	49

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0304- Digester 1 and 2 Elevated Deck														
	Drill and Epoxy #5	3210.101	175.00 ea	31.00 /mh	1,628	5.00 /ea	919	-	-	-	-	-	-	2,546	3,197
	CJ Prep Walls (Roughen top of Walls at Deck connect)	3350.170	186.00 sf	31.00 /mh	1,153	0.15 /sf	28	-	-	-	-	-	-	1,181	1,642
	Digester 1 and 2 Elevated Deck		44.52 cy		22,314		16,452	/cy					1,489	40,255	49,181
	0304- Digester 3 and 4 Elevated Deck Concrete														
	Slab Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	5000 psi Concrete	3310.100	93.33 cy	-	-	165.00 /cy	16,478	-	-	-	-	-	-	16,478	16,478
	Pump Place Suspended Slab	3310.240	93.33 cy	31.00 /mh	3,096	-	-	-	-	-	-	31.26 /cy	3,122	6,218	7,456
	Shore Suspended Slab 15-up	3100.124	2,520.00 sf	31.00 /mh	27,342	4.25 /sf	11,246	-	-	-	-	-	-	38,588	49,524
	Slab Edge Form < 1'	3100.124	266.00 sf	31.00 /mh	4,123	2.00 /sf	559	-	-	-	-	-	-	4,682	6,331
	Suspended Slab Const Joint	3100.124	36.00 sf	31.00 /mh	391	1.50 /sf	54	-	-	-	-	-	-	445	601
	CJ Prep Elevated Slab CJ	3350.170	36.00 sf	31.00 /mh	28	0.20 /sf	7	-	-	-	-	-	-	35	46
	Finish- Hard Trowel	3350.110	2,520.00 sf	31.00 /mh	1,094	/sf	-	-	-	-	-	-	-	1,094	1,531
	Liquid Curing Compounds	3390.170	2,520.00 sf	31.00 /mh	156	0.06 /sf	151	-	-	-	-	-	-	307	370
	Grind and Patch Deck Bottom	3350.130	2,520.00 sf	31.00 /mh	937	0.05 /sf	126	-	-	-	-	-	-	1,063	1,438
	Blockouts in Concrete	3150.194	96.00 sf	31.00 /mh	1,042	2.00 /sf	192	-	-	-	-	-	-	1,234	1,650
	Waterstop Adeka or Swellstop	3510.610	248.00 lf	31.00 /mh	769	8.50 /lf	2,213	-	-	-	-	-	-	2,982	3,290
	Chamfer 3/4"	3150.625	212.00 lf	31.00 /mh	329	0.20 /lf	45	-	-	-	-	-	-	373	505
	Oil Suspended Slab Frm	3100.310	2,520.00 sf	31.00 /mh	1	0.02 /sf	50	-	-	-	-	-	-	51	51
	Nails and Hardware	3150.200	2,520.00 sf	31.00 /mh	1	0.04 /sf	101	-	-	-	-	-	-	102	102
	Drill and Epoxy #5	3210.101	248.00 ea	31.00 /mh	2,306	5.00 /ea	1,302	-	-	-	-	-	-	3,608	4,531
	CJ Prep Walls (Top of Wall at deck wall connect)	3350.170	291.00 sf	31.00 /mh	1,804	0.15 /sf	44	-	-	-	-	-	-	1,848	2,570
	Digester 3 and 4 Elevated Deck Concrete		93.33 cy		43,418		32,567	/cy					3,122	79,107	96,474
	0305- Digester 3 and 4 Elevated Deck Beams														
	5000 psi Concrete	3310.100	48.00 cy	-	-	165.00 /cy	8,474	-	-	-	-	-	-	8,474	8,474
	Other Placement Count	3310.360	12.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Beams	3310.280	48.00 cy	31.00 /mh	1,751	-	-	-	-	-	-	31.26 /cy	1,606	3,357	4,057
	Beam Side Forms	3100.140	864.00 sf	31.00 /mh	10,714	1.50 /sf	1,361	-	-	-	-	-	-	12,074	16,360
	Beam Bottom Forms	3100.140	1,152.00 sf	31.00 /mh	12,499	4.25 /sf	5,141	-	-	-	-	-	-	17,640	22,640
	Grind/Patch Beams	3350.130	1,296.00 sf	31.00 /mh	599	0.05 /sf	65	-	-	-	-	-	-	663	903
	Chamfer 3/4"	3150.625	288.00 lf	31.00 /mh	446	0.20 /lf	60	-	-	-	-	-	-	507	685
	Oil Beam Forms	3100.310	1,296.00 sf	31.00 /mh	0	0.02 /sf	26	-	-	-	-	-	-	26	26
	Nails and Hardware	3150.200	1,296.00 sf	31.00 /mh	0	0.04 /sf	52	-	-	-	-	-	-	52	52
	Digester 3 and 4 Elevated Deck Beams		48.00 cy		26,010		15,179	/cy					1,606	42,795	53,199
	Concrete Concrete				92,604		65,261						6,216	164,082	201,123
	650 Existing Digester 1 to 4				92,604		65,261	/LS					6,216	164,082	201,123
	700 Administration Building														
	Concrete Concrete														
	0302- Admin Building Foundation Pads														
	5000 psi Concrete	3310.100	18.52 cy	-	-	165.00 /cy	3,269	-	-	-	-	-	-	3,269	3,269
	Slab Placement Count	3310.360	10.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	18.52 cy	31.00 /mh	491	-	-	-	-	-	-	31.26 /cy	619	1,111	1,307
	Formwork S.O.G. Edge Form > 1'	3100.120	400.00 sf	31.00 /mh	3,968	1.50 /sf	630	-	-	-	-	-	-	4,598	6,185
	Finegrade Below Concrete	3150.650	250.00 sf	31.00 /mh	155	-	-	-	-	-	-	-	-	155	217
	Finish- Hard Trowel	3350.110	250.00 sf	31.00 /mh	109	/sf	-	-	-	-	-	-	-	109	152
	Liquid Curing Compounds	3390.170	250.00 sf	31.00 /mh	16	0.06 /sf	15	-	-	-	-	-	-	31	37
	Oil SOG Form	3100.310	400.00 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Nails and Hardware	3150.200	400.00 sf	31.00 /mh	0	0.04 /sf	16	-	-	-	-	-	-	16	16
	Dimension Lumber	3150.200	400.00 sf	31.00 /mh	0	0.50 /sf	200	-	-	-	-	-	-	200	200
	Admin Building Foundation Pads		18.52 cy		4,739		4,139	/cy					619	9,497	11,392
	0302- Admin Building Base Slab														
	5000 psi Concrete	3310.100	124.44 cy	-	-	165.00 /cy	21,971	-	-	-	-	-	-	21,971	21,971
	Slab Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	124.44 cy	31.00 /mh	3,302	-	-	-	-	-	-	31.26 /cy	4,162	7,465	8,786
	Formwork S.O.G. Edge Form < 1'	3100.120	236.00 sf	31.00 /mh	1,829	1.50 /sf	372	-	-	-	-	-	-	2,201	2,932
	Formwork S.O.G. Const Joints < 1'	3100.120	118.00 sf	31.00 /mh	1,683	1.50 /sf	186	-	-	-	-	-	-	1,869	2,542
	CJ Prep Slab	3350.170	118.00 sf	31.00 /mh	91	0.15 /sf	18	-	-	-	-	-	-	109	146
	Finegrade Below Concrete	3150.650	3,360.00 sf	31.00 /mh	2,083	-	-	-	-	-	-	-	-	2,083	2,916
	Finish- Hard Trowel	3350.110	3,360.00 sf	31.00 /mh	1,458	/sf	-	-	-	-	-	-	-	1,458	2,042
	Liquid Curing Compounds	3390.170	3,360.00 sf	31.00 /mh	208	0.06 /sf	202	-	-	-	-	-	-	410	493
	Blockouts in Concrete	3150.194	64.00 sf	31.00 /mh	694	2.00 /sf	128	-	-	-	-	-	-	822	1,100
	10 Mil. Vapor Barrier	3150.630	3,360.00 sf	31.00 /mh	208	0.15 /sf	554	-	-	-	-	-	-	763	846
	Oil SOG Form	3100.310	354.00 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	7	7
	Nails and Hardware	3150.200	236.00 sf	31.00 /mh	0	0.04 /sf	9	-	-	-	-	-	-	10	10
	Dimension Lumber	3150.200	236.00 sf	31.00 /mh	0	0.50 /sf	118	-	-	-	-	-	-	118	118
	Admin Building Base Slab		124.44 cy		11,558		23,564	/cy					4,162	39,285	43,908
	0302- Admin Building Curb at PEMB														
	5000 psi Concrete	3310.100	5.86 cy	-	-	165.00 /cy	1,034	-	-	-	-	-	-	1,034	1,034
	Slab Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Pump Place Slab on Grade	3310.230	5.86 cy	31.00 /mh	777	-	-	-	-	-	-	31.26 /cy	196	973	1,284
	Formwork S.O.G. Edge Form < 1'	3100.120	317.58 sf	31.00 /mh	2,461	1.50 /sf	500	-	-	-	-	-	-	2,961	3,946

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302- Admin Building Curb at PEMB															
	Formwork S.O.G. Const Joints < 1'	3100.120	5.36 sf	31.00 /mh	76	1.50 /sf	8	-	-	-	-	-	-	85	115
	CJ Prep Slab	3350.170	5.36 sf	31.00 /mh	4	0.15 /sf	1	-	-	-	-	-	-	5	7
	Finegrade Below Concrete	3150.650	236.00 sf	31.00 /mh	146	-	-	-	-	-	-	-	-	146	205
	Finish- Hard Trowel	3350.110	236.00 sf	31.00 /mh	102	/sf	-	-	-	-	-	-	-	102	143
	Liquid Curing Compounds	3390.170	236.00 sf	31.00 /mh	15	0.06 /sf	14	-	-	-	-	-	-	29	35
	Chamfer 3/4"	3150.625	472.00 lf	31.00 /mh	732	0.20 /lf	99	-	-	-	-	-	-	831	1,123
	Oil SOG Form	3100.310	322.94 sf	31.00 /mh	0	0.02 /sf	6	-	-	-	-	-	-	7	7
	Nails and Hardware	3150.200	317.58 sf	31.00 /mh	0	0.04 /sf	13	-	-	-	-	-	-	13	13
	Dimension Lumber	3150.200	317.58 sf	31.00 /mh	0	0.50 /sf	159	-	-	-	-	-	-	159	159
	Drill and Epoxy #5	3210.101	472.00 ea	31.00 /mh	4,390	5.00 /ea	2,478	-	-	-	-	-	-	6,868	8,623
Admin Building Curb at PEMB			5.86 cy		8,704		4,313	/cy					196	13,212	16,694
0302- Admin Building HVAC Pad															
	5000 psi Concrete	3310.100	4.17 cy	-	-	165.00 /cy	736	-	-	-	-	-	-	736	736
	Crane Place Slab on Grade	3310.230	4.17 cy	31.00 /mh	138	-	-	-	-	-	-	-	-	138	193
	Formwork S.O.G. Edge Form > 1'	3100.120	72.00 sf	31.00 /mh	714	1.50 /sf	113	-	-	-	-	-	-	828	1,113
	Finegrade Below Concrete	3150.650	75.00 sf	31.00 /mh	47	-	-	-	-	-	-	-	-	47	65
	Finish- Hard Trowel	3350.110	75.00 sf	31.00 /mh	33	/sf	-	-	-	-	-	-	-	33	46
	Liquid Curing Compounds	3390.170	75.00 sf	31.00 /mh	5	0.06 /sf	5	-	-	-	-	-	-	9	11
	Chamfer 3/4"	3150.625	48.00 lf	31.00 /mh	74	0.20 /lf	10	-	-	-	-	-	-	84	114
	Road Base Below Concrete	2305.300	2.78 cy	31.00 /mh	43	22.00 /ton	121	-	-	-	-	-	-	164	181
	Oil SOG Form	3100.310	72.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	72.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	72.00 sf	31.00 /mh	0	0.50 /sf	36	-	-	-	-	-	-	36	36
	SOG Rebar	3210.104	0.52 tn	31.00 /mh	404	1,400.00 /tn	766	-	-	-	-	-	-	1,170	1,331
Admin Building HVAC Pad			4.17 cy		1,457		1,791	/cy						3,248	3,831
0303- Admin Building Concrete Stem Walls															
	Pump Place Walls	3310.260	36.22 cy	31.00 /mh	1,202	-	-	-	-	-	-	31.26 /cy	1,212	2,413	2,894
	5000 psi Concrete	3310.100	36.22 cy	-	-	165.00 /cy	6,395	-	-	-	-	-	-	6,395	6,395
	Wall Placement Count	3310.360	4.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Job Built with Plyform 0-4'	3100.180	1,416.00 sf	31.00 /mh	10,974	1.50 /sf	2,230	-	-	-	-	-	-	13,204	17,594
	Wall Pilaster Forms	3150.192	270.00 sf	31.00 /mh	2,930	1.50 /sf	425	-	-	-	-	-	-	3,355	4,527
	Wall Bulkhead Forms	3150.192	12.00 sf	31.00 /mh	171	1.50 /sf	19	-	-	-	-	-	-	190	258
	CJ Prep Walls	3350.170	248.00 sf	31.00 /mh	192	0.15 /sf	37	-	-	-	-	-	-	229	306
	Finish- Top of Wall	3350.110	236.00 sf	31.00 /mh	102	/sf	-	-	-	-	-	-	-	102	143
	Liquid Curing Walls	3390.170	1,922.00 sf	31.00 /mh	60	0.06 /sf	115	-	-	-	-	-	-	175	199
	Grind/Patch Walls	3350.130	1,686.00 sf	31.00 /mh	627	0.05 /sf	84	-	-	-	-	-	-	711	962
	Oil Wall Forms	3100.310	1,686.00 sf	31.00 /mh	1	0.02 /sf	34	-	-	-	-	-	-	34	34
	Nails and Hardware	3150.200	1,686.00 sf	31.00 /mh	1	0.04 /sf	67	-	-	-	-	-	-	68	68
	Form Ties 12"	3150.632	354.00 ea	31.00 /mh	0	2.35 /ea	832	-	-	-	-	-	-	832	832
	Form Ties Specialty	3150.632	30.00 ea	31.00 /mh	186	5.00 /ea	150	-	-	-	-	-	-	336	410
	Dimension Lumber	3150.200	1,686.00 sf	31.00 /mh	1	0.50 /sf	843	-	-	-	-	-	-	844	844
	Rebar Templates	3200.980	236.00 lf	31.00 /mh	366	0.50 /lf	118	-	-	-	-	-	-	484	630
Admin Building Concrete Stem Walls			36.22 cy		16,811		11,350	/cy					1,212	29,373	36,097
0310- Equipment pads at Admin															
	Equipment Pad Form 6"	3100.164	54.00 sf	31.00 /mh	552	1.50 /sf	85	-	-	-	-	-	-	637	858
	Oil Equipment Pad Form	3100.310	54.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	4500 psi Concrete	3310.100	1.87 cy	-	-	165.00 /cy	330	-	-	-	-	-	-	330	330
	Other Placement Count	3310.360	5.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Equipment Pads	3310.300	1.87 cy	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Liquid Curing Compounds	3390.170	101.00 sf	31.00 /mh	6	0.06 /sf	6	-	-	-	-	-	-	12	15
	Finish- Hard Trowel	3350.110	101.00 sf	31.00 /mh	44	/sf	-	-	-	-	-	-	-	44	61
	Chamfer	3150.625	108.00 lf	31.00 /mh	50	0.20 /lf	23	-	-	-	-	-	-	73	93
	Misc. Pad Rebar	3210.104	0.23 tn	31.00 /mh	218	1,400.00 /tn	344	-	-	-	-	-	-	562	649
	Nails and Hardware	3150.200	54.00 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Drill and Epoxy #4	3210.101	108.00 ea	31.00 /mh	670	4.00 /ea	454	-	-	-	-	-	-	1,123	1,391
Equipment pads at Admin			1.87 cy		1,602		1,245	/cy						2,847	3,488
Concrete Concrete					44,871		46,402						6,189	97,462	115,410
700 Administration Building					44,871		46,402	/LS					6,189	97,462	115,410
750 Lab and Control Building															
Concrete Concrete															
0302- Fill and Place Concrete cap at UV Channels															
	5000 psi Concrete	3310.100	4.59 cy	-	-	165.00 /cy	811	-	-	-	-	-	-	811	811
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Buggy Place Slab on Grade	3310.230	4.59 cy	31.00 /mh	152	-	-	-	-	-	-	-	-	152	213
	Formwork S.O.G. Edge Form < 1'	3100.120	70.00 sf	31.00 /mh	543	1.50 /sf	110	-	-	-	-	-	-	653	870
	Finegrade Below Concrete	3150.650	124.00 sf	31.00 /mh	77	-	-	-	-	-	-	-	-	77	108
	Finish- Hard Trowel	3350.110	124.00 sf	31.00 /mh	54	/sf	-	-	-	-	-	-	-	54	75
	Liquid Curing Compounds	3390.170	124.00 sf	31.00 /mh	8	0.06 /sf	7	-	-	-	-	-	-	15	18
	Oil SOG Form	3100.310	70.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302-	Fill and Place Concrete cap at UV Channels														
	Nails and Hardware	3150.200	70.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	70.00 sf	31.00 /mh	0	0.50 /sf	35	-	-	-	-	-	-	35	35
	SOG Rebar	3210.104	0.57 tn	31.00 /mh	445	1,400.00 /tn	844	-	-	-	-	-	-	1,289	1,467
	Drill and Epoxy #5	3210.101	140.00 ea	31.00 /mh	1,302	5.00 /ea	735	-	-	-	-	-	-	2,037	2,558
	Place Concrete Flow Fill under concrete cap	3310.230	30.00 cy	31.00 /mh	1,990	115.00 /cy	3,692	-	-	-	-	-	-	5,682	6,478
	Fill and Place Concrete cap at UV Channels		4.59 cy		4,570		6,239	/cy						10,809	12,637
	Concrete Concrete				4,570		6,239							10,809	12,637
	750 Lab and Control Building				4,570		6,239	/LS						10,809	12,637
	033000 Cast-In-Place Concrete				2,298,361		2,690,979		1,523,411		549,276		402,157	7,464,184	8,394,514
042200	Concrete Unit Masonry														
	100 Headworks														
	Masonry Masonry														
	014- Winter Conditions Masonry														
	Winter Conditions	1572.100	2.00 mnth	31.00 /mh	5,704	2,000.00 /mnt h	4,000	-	-	-	-	-	-	9,704	11,986
	Winter Heat Fuel	1572.100	2.00 mnth	-	-	2,000.00 /mnt h	4,000	-	-	-	-	-	-	4,000	4,000
	Winter Conditions Masonry				5,704		8,000	/mo						13,704	15,986
	0401- Masonry Headworks														
	Sub - Masonry Subcontr	4000.980	1.00 ls	-	-	-	-	338,000.00 /ls	338,000	-	-	-	-	338,000	338,000
	Masonry Rebar Dray	4080.210	320.00 mnhr	31.00 /mh	9,920	-	-	-	-	-	-	-	-	9,920	13,888
	Rebar Masonry	3200.980	1.00 ls	31.00 /mh		24,000.00 /ls	24,000	-	-	-	-	-	-	24,000	24,000
	Temp Shore Window	4000.210	7.00 ea	31.00 /mh	1,302	100.00 /ea	700	-	-	-	-	-	-	2,002	2,523
	Temp Shore Single door	4000.210	1.00 ea	31.00 /mh	186	100.00 /ea	100	-	-	-	-	-	-	286	360
	Temp Shore Double Doors	4000.210	1.00 ea	31.00 /mh	372	200.00 /ea	200	-	-	-	-	-	-	572	721
	Temp Shore Louvers	4000.210	2.00 ea	31.00 /mh	372	100.00 /ea	200	-	-	-	-	-	-	572	721
	Sub - Masonry Bond	4000.980	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Masonry Headworks				12,152		25,200	/ea	338,000					375,352	380,213
	Masonry Masonry				17,856		33,200		338,000					389,056	396,198
	100 Headworks				17,856		33,200	/LS	338,000					389,056	396,198
	042200 Concrete Unit Masonry				17,856		33,200		338,000					389,056	396,198
055000	Metal Fabrication														
	001 General														
	GEN General														
	05 50- Misc Metals Assembly														
	Purchase Misc. Metals	5001.130	1.00 LS	31.00 /mh	31	994,260.00 /LS	994,260	-	-	-	-	-	-	994,291	994,303
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	2.00 mnth	7,296.00 /mnth	14,592	350.00 /mnt h	700	-	-	9,500.00 /mnth	19,000	1,500.00 /mnth	3,000	37,292	43,509
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	9.00 mnth	-	-	-	-	-	-	1,200.00 /mnth	10,800	100.00 /mnth	900	11,700	11,916
	Boom Lift (L)	1900.300	1.50 mnth	-	-	-	-	-	-	2,800.00 /mnth	4,200	1,250.00 /mnth	1,875	6,075	6,159
	Welding Machine 300 amp (33 HP) (L)	1900.012	3.00 mnth	-	-	/mnt h		-	-	350.00 /mnth	1,050	550.00 /mnth	1,650	2,700	2,721
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	3.00 mnth	-	-	-	-	-	-	3,500.00 /mnth	10,500	1,200.00 /mnth	3,600	14,100	14,310
	Misc Metals Assembly		1.00 ea		14,623		994,960	/ea			45,550		11,025	1,066,158	1,072,918
	GEN General				14,623		994,960				45,550		11,025	1,066,158	1,072,918
	001 General				14,623		994,960	/LS			45,550		11,025	1,066,158	1,072,918
	051 Site Civil														
	Bollards														
	05 55- Bollards														
	Bollards - 6" x 7"	5001.125	42.00 ea	31.00 /mh	31,248	0.00 /ea	0	-	-	-	-	-	-	31,248	43,747
	Place Concrete	3310.270	21.00 cy	31.00 /mh	383	-	-	-	-	-	-	-	-	383	536
	Purchase 4000 psi Concrete	3310.100	21.00 cy	-	-	165.00 /cy	3,708	-	-	-	-	-	-	3,708	3,708
	Bobcat Skid Steer (85hp)- track (L) with auger	1900.131	1.00 mnth	-	-	-	-	-	-	4,000.00 /mnth	4,000	2,000.00 /mnth	2,000	6,000	6,080
	Formwork Sonotube 18"	3100.112	84.00 lf	31.00 /mh	1,302	13.00 /lf	1,147	-	-	-	-	-	-	2,449	2,969
	Bollards		40.00 EA		32,933		4,854	/EA			4,000		2,000	43,787	57,041
	Bollards				32,933		4,854				4,000		2,000	43,787	57,041
	Misc. Metals														
	05 50- Sidewalk Drain														
	Sidewalk Drain	5001.130	8.00 ea	31.00 /mh	3,968	500.00 /ea	4,000	-	-	-	-	-	-	7,968	9,555
	Sidewalk Drain		1.00 ea		3,968		4,000	/ea						7,968	9,555

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Misc. Metals				3,968		4,000							7,968	9,555
	051 Site Civil				36,901		8,854	/LS			4,000		2,000	51,755	66,596
100	Headworks														
	Misc. Metals														
	05 02- Install W10x15 Beams - HDWK Stair Roofing														
	Erect Steel W 10 Beams (7'-4" Long)	5120.010	4.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Embed Plate	5124.005	8.00 ea	31.00 /mh	992	0.00 /lbs	0	-	-	-	-	-	-	992	1,389
	Epoxy Anchor 5/8 x 6in HDG	5001.051	24.00 ea	31.00 /mh	37	6.00 /ea	144	-	-	-	-	-	-	181	196
	Non Shrink Grout	3601.100	6.00 cf	31.00 /mh	2,232	60.00 /cf	360	-	-	-	-	-	-	2,592	3,485
	Field Welding - Carbon Steel	5000.985	8.00 hrs	31.00 /mh	248	/hrs		142.36 /hrs	1,139	/hrs		-	-	1,387	1,486
	Install W10x15 Beams - HDWK Stair Roofing		2.00 ls		4,501		504	569.43 /ls	1,139					6,144	7,945
05	12- Veneer Support Angle														
	Angle 8 x 8 x 3/4	5123.800	404.00 lf	31.00 /mh	10,645	0.01 /lbs	3	-	-	-	-	-	-	10,648	14,907
	Concrete Anchor - 3/4" Dia x 9"	3150.700	340.00 ea	31.00 /mh	5,270	6.00 /ea	2,040	-	-	-	-	-	-	7,310	9,418
	Veneer Support Angle		2.00 ea		15,915		2,043	/ea						17,958	24,325
05	12- Veneer - Lintel Angles														
	Set Angle Lintels - Louvers	4090.130	2.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	Set Angle Lintels - Single Doors	4090.130	4.00 ea	31.00 /mh	992	0.01 /ea	0	-	-	-	-	-	-	992	1,389
	Set Angle Lintels - Double Doors	4090.130	3.00 ea	31.00 /mh	1,116	0.01 /ea	0	-	-	-	-	-	-	1,116	1,562
	Set Angle Lintels - Overhead Doors	4090.130	3.00 ea	31.00 /mh	1,488	0.01 /ea	0	-	-	-	-	-	-	1,488	2,083
	Set Angle Lintels - Windows ~9' Long	4090.130	7.00 ea	31.00 /mh	2,604	0.01 /ea	0	-	-	-	-	-	-	2,604	3,646
	Epoxy Anchor 3/4 x 8-1/2in EG	5001.050	96.00 ea	31.00 /mh	149	6.00 /ea	576	-	-	-	-	-	-	725	784
	Veneer - Lintel Angles		2.00 ea		6,845		576	/ea						7,421	10,159
05	21- Install 30K12 Roof Joists														
	Joist K-Series 30 K12 (9 EA)	5050.101	9.00 ea	31.00 /mh	2,511	0.01 /lbs	2	-	-	-	-	-	-	2,513	3,517
	Epoxy Anchor 3/4 x 10in HDG	5001.051	42.00 ea	31.00 /mh	326	6.00 /ea	252	-	-	-	-	-	-	578	708
	20 GA Galv. Closure Plates	5124.005	36.00 ea	31.00 /mh	4,464	0.01 /lbs	3	-	-	-	-	-	-	4,467	6,252
	Non Shrink Grout	3601.100	18.00 cf	31.00 /mh	6,696	60.00 /cf	1,080	-	-	-	-	-	-	7,776	10,454
	Epoxy Anchor 1/4 x 3-1/4in HDG - For Closure Plates	5001.051	144.00 ea	31.00 /mh	446	6.00 /ea	864	-	-	-	-	-	-	1,310	1,489
	Precast Tees - embed plates	3410.120	18.00 ea	31.00 /mh	2,232	/ea						-	-	2,232	3,125
	Field Welding - Carbon Steel	5000.985	16.00 hrs	31.00 /mh	496	/hrs		142.35 /hrs	2,278	/hrs		-	-	2,774	2,972
	Angle 1 x 1 x 1/8	5123.801	180.00 lf	-	-	0.00 /lbs	0	-	-	-	-	-	-	0	0
	Angle 1 clip	5123.801	6.00 ea	-	-	0.00 /lbs	0	-	-	-	-	-	-	0	0
	Angle at hatch	5123.804	1.00 ea	-	-	0.00 /lbs	0	-	-	-	-	-	-	0	0
	Bar Joinst bridging	5001.130	1.00 ls	31.00 /mh	2,604	/ls		-	-		-	-	-	2,604	3,646
	Field Welding - Carbon Steel	5000.985	16.00 hrs	31.00 /mh	496	/hrs		142.35 /hrs	2,278	/hrs		-	-	2,774	2,972
	Install 30K12 Roof Joists		1.00 ls		20,271		2,200	4,555.34 /ls	4,555					27,027	35,135
05	32- Railings Aluminum														
	Alum Handrail	5001.115	98.00 lf	31.00 /mh	3,646	0.01 /lf	1	-	-	-	-	-	-	3,647	5,105
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	88.00 ea	31.00 /mh	273	5.00 /ea	440	-	-	-	-	-	-	713	822
	Fall Protection	1116.100	1.00 ls	-	-	-	-	-	-	/ls		-	-		
	Neoprene	7100.100	13.00 lf	31.00 /mh	101	5.00 /lf	70	-	-	-	-	-	-	170	211
	Toe Board	5124.030	48.00 lf	31.00 /mh	0	0.01 /lf	0	-	-	-	-	-	-	0	0
	Railings Aluminum		90.00 lf		4,019		511	/lf						4,530	6,138
05	45- AL Checkered Plate - 3/8" Thick														
	Checkered Plate 3/8"	5001.122	587.00 sf	31.00 /mh	10,008	0.01 /sf	6	-	-	-	-	-	-	10,014	14,018
	SS Grating Angle - Embed	5001.145	551.00 lf	31.00 /mh	4,270	0.01 /lf	6	-	-	-	-	-	-	4,276	5,984
	1/4" SS Flat Head Screws w/ (2) Nuts	6090.500	551.00 ea	31.00 /mh	0	2.00 /ea	1,102	-	-	-	-	-	-	1,102	1,102
	1/8" Thick x 1 1/2" Neoprene Gasket	7100.100	551.00 lf	31.00 /mh	854	5.00 /lf	2,948	-	-	-	-	-	-	3,802	4,144
	AL Checkered Plate - 3/8" Thick		587.00 sf		15,133		4,061	/sf						19,194	25,247
05	50- Hose Racks														
	Hose Racks	5001.130	7.00 ea	31.00 /mh	434	/ea		-	-	-	-	-	-	434	608
	Hose Racks		1.00 ea		434			/ea						434	608
05	50- Ladder														
	Ladder - 10'	5001.140	1.00 ea	31.00 /mh	744	0.01 /ea	0	-	-	-	-	-	-	744	1,042
	Anchors for Ladder	5001.140	8.00 ea	31.00 /mh	31	5.00 /ea	40	-	-	-	-	-	-	71	83
	Grout for Ladder	5001.140	1.00 ea	31.00 /mh	62	20.00 /ea	20	-	-	-	-	-	-	82	107
	Ladder		1.00 ea		837		60	/ea						897	1,232
05	50- Stairs														
	Aluminum Stairs - 2 Platform - 20' Tall	5001.100	33.00 rs	31.00 /mh	6,138	0.01 /rs	0	-	-	-	-	-	-	6,138	8,594

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Stairs														
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	248	60.00 /cf	60	-	-	-	-	-	-	308	407
	11 GA AL Plate - Riser	5124.005	35.00 ea	31.00 /mh	0	0.01 /lb s	3	-	-	-	-	-	-	3	3
	Erect AL 8x7.02 I Beams	5120.008	2.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchors for Grating Angle	5001.120	14.00 ea	31.00 /mh	54	5.00 /ea	70	-	-	-	-	-	-	124	146
	Grating Angle - Bolt on	5001.120	15.00 lf	31.00 /mh		0.01 /lf	0	-	-	-	-	-	-	0	0
	Erect AL I 12 Beams	5120.012	2.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchor Bolts 3/4" SST 7.5	6090.500	56.00 ea	31.00 /mh	174	6.00 /ea	336	-	-	-	-	-	-	510	579
	SST Self Tapping Tek Screw 1" Long	7460.100	245.00 ea	31.00 /mh	0	0.50 /ea	131	-	-	-	-	-	-	131	131
	Neoprene	7100.100	4.00 lf	31.00 /mh		5.00 /lf	21	-	-	-	-	-	-	21	21
	Alum Handrail	5001.115	40.00 lf	31.00 /mh	1,860	0.00 /lf	0	-	-	-	-	-	-	1,860	2,604
	Anchors for Handrail	5001.115	34.00 ea	31.00 /mh	132	5.00 /ea	170	-	-	-	-	-	-	302	354
	Stairs		1.00 ea		8,618		816	/ea						9,434	12,881
05	50- Install Deck Angle and Decking														
	Steel Roof Deck 20 ga. 1-1/2"	5050.210	2,747.00 sf	31.00 /mh	6,813	0.00 /sf	0	-	-	-	-	-	-	6,813	9,538
	Fastners for Side Laps	7460.200	546.00 ea	31.00 /mh	0	0.50 /ea	292	-	-	-	-	-	-	292	292
	#12 Screws for 36/5 Pattern	7460.100	945.00 ea	31.00 /mh	0	1.00 /ea	1,011	-	-	-	-	-	-	1,011	1,012
	Angle 3 x 3 x 1/4	5123.803	219.00 lf	31.00 /mh	6,789	0.00 /lb s	0	-	-	-	-	-	-	6,789	9,505
	Anchor Bolt 5/8	5001.064	110.00 ea	31.00 /mh	1,705	6.00 /ea	660	-	-	-	-	-	-	2,365	3,047
	Install Deck Angle and Decking		1.00 ea		15,307		1,963	/ea						17,270	23,393
05	50- 1/4" Plates for Future Gate Locations - Splitter Box														
	Steel Plate 1/4" (QTY 3)	5124.005	3.00 ea	31.00 /mh	1,488	0.01 /lb s	0	-	-	-	-	-	-	1,488	2,084
	Anchor Bolts 1/2" 316 SST 5" Long	6090.500	36.00 ea	31.00 /mh	112	5.00 /ea	180	-	-	-	-	-	-	292	336
	Neoprene	7100.100	48.00 lf	31.00 /mh	37	5.00 /lf	257	-	-	-	-	-	-	294	309
	1/4" Plates for Future Gate Locations - Splitter Box		1.00 ea		1,637		437	/ea						2,074	2,729
05	50- Overhead Door "Jamb"														
	Roll-Up Door Frames - 28 LF EA	5590.100	6.00 ea	31.00 /mh	2,232	0.01 /ea	0	-	-	-	-	-	-	2,232	3,125
	Door jamb hardware	5001.130	6.00 ea	31.00 /mh	186	150.00 /ea	900	-	-	-	-	-	-	1,086	1,160
	Overhead Door "Jamb"		6.00 ea		2,418		900	/ea						3,318	4,285
05	60- 4'-8" x 7' AL Floor Door														
	Access Hatch (Incl. Shipping for All) 4.67 X 7 ft	5001.110	1.00 ea	31.00 /mh	1,240	0.01 /ea	0	-	-	-	-	-	-	1,240	1,736
	Set Angle	3150.710	23.33 LF	31.00 /mh	72	0.00 /L F	0	-	-	-	-	-	-	72	101
	4'-8" x 7' AL Floor Door		1.00 ea		1,312		0	/ea						1,312	1,837
05	60- Roof Hatch 3'x2'-6"														
	Cut In Opening	2220.083	1.00 ls	31.00 /mh	6	-	-	-	-	/ch		-	-	6	9
	Access Hatch Bilco J4 36x30	5001.110	1.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	Roof Hatch 3'x2'-6"		1.00 ea		254		0	/ea						254	356
	Misc. Metals				97,502		14,072		5,694					117,268	156,268
	100 Headworks				97,502		14,072	/LS	5,694					117,268	156,268
150	Influent Pump Station														
	Misc. Metals														
05	50- Eye Bolts for Securing Ladders														
	Eye Bolt 3/4x3 SS 316	5001.064	4.00 ea	31.00 /mh	496	50.00 /ea	200	-	-	-	-	-	-	696	894
	Eye Bolts for Securing Ladders		1.00 ea		496		200	/ea						696	894
05	60- 6' x 4' Hatch														
	Access Hatch Bilco JD4 6" X 4'	5001.110	2.00 ea	31.00 /mh	1,488	0.01 /ea	0	-	-	-	-	-	-	1,488	2,083
	Set Angle	3150.710	40.00 LF	31.00 /mh	124	0.01 /L F	0	-	-	-	-	-	-	124	174
	6' x 4' Hatch		2.00 ea		1,612		0	/ea						1,612	2,257
05	60- 3' x 3' Hatch														
	Access Hatch Bilco J4 36x36	5001.110	3.00 ea	31.00 /mh	1,116	0.01 /ea	0	-	-	-	-	-	-	1,116	1,562
	Set Angle	3150.710	36.00 LF	31.00 /mh	112	0.01 /L F	0	-	-	-	-	-	-	112	157
	3' x 3' Hatch		3.00 ea		1,228		0	/ea						1,228	1,719
05	60- 6' x 8' Hatch														
	Access Hatch Bilco JD4AL 6' X 8'	5001.110	2.00 ea	31.00 /mh	248	8,000.00 /ea	16,000	-	-	-	-	-	-	16,248	16,347
	Set Angle	3150.710	56.00 LF	31.00 /mh	434	0.01 /L F	1	-	-	-	-	-	-	435	608
	6' x 8' Hatch		2.00 ea		682		16,001	/ea						16,683	16,955
	Misc. Metals				4,018		16,201							20,219	21,826
	150 Influent Pump Station				4,018		16,201	/LS						20,219	21,826
200	Aeration Basin														
	Misc. Metals														
05	32- Railings Aluminum														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	32- Railings Aluminum														
	Alum Handrail	5001.115	716.00 lf	31.00 /mh	19,976	0.01 /lf	7	-	-	-	-	-	-	19,984	27,974
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	716.00 ea	31.00 /mh	1,110	5.00 /ea	3,580	-	-	-	-	-	-	4,690	5,134
	Fall Protection	1116.100	1.00 ls	-	-	-	-	-	-	/ls		-	-		
	Neoprene	7100.100	90.00 lf	31.00 /mh	70	5.00 /lf	482	-	-	-	-	-	-	551	579
	Toe Board	5124.030	716.00 lf	31.00 /mh	0	0.01 /lf	7	-	-	-	-	-	-	7	7
	Railings Aluminum		90.00 lf		21,156		4,076	/lf						25,232	33,694
05	43- Floor Grating - Aluminum														
	Alum Floor Grating 1.50"	5001.120	72.00 sf	31.00 /mh	558	0.01 /sf	1	-	-	-	-	-	-	559	782
	Alum Grating Angle - Embed 1.5x1.5x1/4	5001.145	44.00 lf	31.00 /mh	341	0.01 /lf	0	-	-	-	-	-	-	341	478
	Floor Grating - Aluminum		144.00 sf		899		1	/sf						900	1,260
05	50- Stairs - East														
	Aluminum Stairs - 2 Platform - 20' Tall	5001.100	20.00 rs	31.00 /mh	1,550	0.01 /rs	0	-	-	-	-	-	-	1,550	2,170
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh		60.00 /cf	60	-	-	-	-	-	-	60	60
	8 GA AL Plate - Half Riser	5124.005	20.00 ea	31.00 /mh	0	0.01 /lb s	2	-	-	-	-	-	-	2	2
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	31	0.01 /lf	0	-	-	-	-	-	-	31	43
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	16	6.00 /ea	30	-	-	-	-	-	-	46	52
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	12	0.01 /ea	0	-	-	-	-	-	-	12	17
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tek Screw 1" Long for Half Riser	7460.100	140.00 ea	31.00 /mh	0	0.50 /ea	75	-	-	-	-	-	-	75	75
	Aluminum 3 Line Rail	5001.115	47.00 lf	31.00 /mh	2,186	0.01 /lf	0	-	-	-	-	-	-	2,186	3,060
	Anchors for Handrail	5001.115	24.00 ea	31.00 /mh	93	5.00 /ea	120	-	-	-	-	-	-	213	250
	Stairs - East		1.00 ea		3,922		351	/ea						4,273	5,841
05	50- Stairs - North														
	Aluminum Stairs - 2 Platform - 20' Tall	5001.100	20.00 rs	31.00 /mh	1,550	0.01 /rs	0	-	-	-	-	-	-	1,550	2,170
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh		60.00 /cf	60	-	-	-	-	-	-	60	60
	8 GA AL Plate - Haf Riser	5124.005	20.00 ea	31.00 /mh	0	0.01 /lb s	2	-	-	-	-	-	-	2	2
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	31	0.01 /lf	0	-	-	-	-	-	-	31	43
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	16	6.00 /ea	30	-	-	-	-	-	-	46	52
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	12	0.01 /ea	0	-	-	-	-	-	-	12	17
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tex Screw 1" Long for Half Riser	7460.100	140.00 ea	31.00 /mh	0	0.50 /ea	75	-	-	-	-	-	-	75	75
	Aluminum 3 Line Rail	5001.115	47.00 lf	31.00 /mh	2,186	0.01 /lf	0	-	-	-	-	-	-	2,186	3,060
	Anchors for Handrail	5001.115	24.00 ea	31.00 /mh	93	5.00 /ea	120	-	-	-	-	-	-	213	250
	Stairs - North		1.00 ea		3,922		351	/ea						4,273	5,841
	Misc. Metals				29,898		4,779							34,678	46,637
	200 Aeration Basin				29,898		4,779	/LS						34,678	46,637
250	Secondary Clarifier Splitter Box														
	Misc. Metals														
05	32- Railings Aluminum														
	Alum Handrail	5001.115	88.00 lf	31.00 /mh	2,455	0.01 /lf	1	-	-	-	-	-	-	2,456	3,438
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	88.00 ea	31.00 /mh	273	5.00 /ea	440	-	-	-	-	-	-	713	822
	Fall Protection	1116.100	1.00 ls	-	-	-	-	-	-	/ls		-	-		
	Neoprene	7100.100	33.00 lf	31.00 /mh	102	5.00 /lf	177	-	-	-	-	-	-	279	320
	Toe Board	5124.030	88.00 lf	31.00 /mh	0	0.01 /lb s	108	-	-	-	-	-	-	108	108
	Railings Aluminum		90.00 lf		2,830		725	/lf						3,556	4,688
05	43- Floor Grating - Aluminum														
	Alum Floor Grating 1.50"	5001.120	68.00 sf	31.00 /mh	632	0.01 /sf	1	-	-	-	-	-	-	633	886
	Alum Grating Angle - Embed 1.5x1.5x1/4	5001.145	54.00 lf	31.00 /mh	419	0.01 /lf	1	-	-	-	-	-	-	419	586
	Angle 3 x 3 x 1/4	5123.803	10.00 lf	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Anchor Bolts 5/8" SST - 6.5" Long for Angle	6090.500	8.00 ea	31.00 /mh	25	6.00 /ea	48	-	-	-	-	-	-	73	83
	Floor Grating - Aluminum		68.00 sf		1,076		50	/sf						1,125	1,556
05	45- AL Checkered Plate - 3/8"														
	Checkered Plate 3/8"	5001.122	68.00 sf	31.00 /mh	632	0.01 /sf	1	-	-	-	-	-	-	633	886
	SS Grating Angle - Embed	5001.145	54.00 lf	31.00 /mh	419	0.01 /lf	1	-	-	-	-	-	-	419	586
	Tubing LF #1	15219.100	54.00 lf	31.00 /mh	134	2.00 /lf	119	-	-	-	-	-	-	253	306
	Angle 3 x 3 x 1/4	5123.803	10.00 lf	31.00 /mh	78	0.01 /lb s	1	-	-	-	-	-	-	78	109
	Anchor Bolts 5/8" SST - 6.5" Long For Angle	6090.500	8.00 ea	31.00 /mh	25	6.00 /ea	48	-	-	-	-	-	-	73	83

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	AL Checkered Plate - 3/8"		68.00 sf		1,287		169	/sf						1,456	1,971
05	50- 1/2" Plates for Future Gate Locations														
	Steel Plate 1/2" (QTY 2)	5124.005	10.00 sf	31.00 /mh	992	0.01 /lb s	1	-	-	-	-	-	-	993	1,390
	Anchor Bolts 1/2" 316 SST	6090.500	42.00 ea	31.00 /mh	130	5.00 /ea	210	-	-	-	-	-	-	340	392
	Neoprene Sheets - 1/8"	7100.100	3.00 sf	31.00 /mh	9	5.00 /sf	16	-	-	-	-	-	-	25	29
	1/2" Plates for Future Gate Locations		1.00 ea		1,132		227	/ea						1,359	1,811
05	50- Stairs														
	Aluminum Stairs - 2 Platform - 7.5' Tall	5001.100	17.00 rs	31.00 /mh	1,581	0.01 /rs	0	-	-	-	-	-	-	1,581	2,214
	Epoxy Anchor 5/8 x 7in	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh		60.00 /cf	60	-	-	-	-	-	-	60	60
	8 GA AL Plate -Half Riser	5124.005	12.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Anchor Bolt 3/4 SS - Stringer to Bridge Beam	5001.063	4.00 ea	31.00 /mh	6	0.01 /ea	0	-	-	-	-	-	-	6	9
	Self Tapping Tex Screw 1" long for Half Riser	7460.100	119.00 ea	31.00 /mh	0	0.50 /ea	64	-	-	-	-	-	-	64	64
	Aluminum 3 Line Rail	5001.115	42.00 lf	31.00 /mh	1,953	0.01 /lf	0	-	-	-	-	-	-	1,953	2,735
	Anchors for Handrail	5001.115	36.00 ea	31.00 /mh	140	5.00 /ea	180	-	-	-	-	-	-	320	375
	Stairs		1.00 ea		3,692		329	/ea						4,021	5,498
	Misc. Metals				10,017		1,500							11,517	15,523
	250 Secondary Clarifier Splitter Box				10,017		1,500	/LS						11,517	15,523
300	Secondary Clarifiers 5 and 6														
	Misc. Metals														
05	43- Floor Grating - Aluminum														
	Alum Floor Grating 1.50"	5001.120	33.00 sf	31.00 /mh	512	0.01 /sf	0	-	-	-	-	-	-	512	716
	Alum Grating Angle - Embed 1.5x1.5x1/4	5001.145	33.00 lf	31.00 /mh	256	0.01 /lf	0	-	-	-	-	-	-	256	358
	Floor Grating - Aluminum		144.00 sf		767		1	/sf						768	1,075
05	50- Stairs - Clarifier 5														
	Aluminum Stairs - 2 Platform - 7.5' Tall	5001.100	12.00 rs	31.00 /mh	1,488	0.01 /rs	0	-	-	-	-	-	-	1,488	2,083
	Epoxy Anchor 5/8 x 7in	5001.050	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate -Half Riser	5124.005	12.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Self Tapping Tex Screw 1" long for Half Riser	7460.100	84.00 ea	31.00 /mh	0	0.50 /ea	45	-	-	-	-	-	-	45	45
	Aluminum 3 Line Rail	5001.115	27.00 lf	31.00 /mh	1,256	0.01 /lf	0	-	-	-	-	-	-	1,256	1,758
	Anchors for Handrail	5001.115	20.00 ea	31.00 /mh	78	5.00 /ea	100	-	-	-	-	-	-	178	209
	Anchor Bolt 3/4 SS - Stringer to Bridge Beam	5001.063	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Stairs - Clarifier 5		1.00 ea		2,964		254	/ea						3,218	4,403
05	50- Stairs - Clarifier 6														
	Aluminum Stairs - 2 Platform - 7.5' Tall	5001.100	12.00 rs	31.00 /mh	1,488	0.01 /rs	0	-	-	-	-	-	-	1,488	2,083
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate -Half Riser	5124.005	12.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Anchor Bolt 3/4 SS - Stringer to Bridge Beam	5001.063	4.00 ea	31.00 /mh	6	0.01 /ea	0	-	-	-	-	-	-	6	9
	Self Tapping Tex Screw 1" long for Half Riser	7460.100	84.00 ea	31.00 /mh	0	0.50 /ea	45	-	-	-	-	-	-	45	45
	Aluminum 3 Line Rail	5001.115	27.00 lf	31.00 /mh	1,256	0.01 /lf	0	-	-	-	-	-	-	1,256	1,758
	Anchors for Handrail	5001.115	20.00 ea	31.00 /mh	78	5.00 /ea	100	-	-	-	-	-	-	178	209
	Stairs - Clarifier 6		1.00 ea		2,957		230	/ea						3,188	4,371
	Misc. Metals				6,688		485							7,174	9,849
	300 Secondary Clarifiers 5 and 6				6,688		485	/LS						7,174	9,849
350	Step Feed Process Building														
	Misc. Metals														
05	32- Railings Aluminum														
	Alum Handrail	5001.115	54.00 lf	31.00 /mh	1,507	0.01 /lf	1	-	-	-	-	-	-	1,507	2,110
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	54.00 ea	31.00 /mh	167	5.00 /ea	270	-	-	-	-	-	-	437	504
	Toe Board	5124.030	54.00 lf	31.00 /mh	0	0.01 /lb s	66	-	-	-	-	-	-	66	66
	Railings Aluminum		90.00 lf		1,674		337	/lf						2,011	2,680
05	43- Floor Grating - Aluminum														
	Alum Floor Grating 1.25"	5001.120	9.00 sf	31.00 /mh	140	0.01 /sf	0	-	-	-	-	-	-	140	195
	Alum Grating Angle - Embed 1.5x1.5x1/4	5001.145	12.00 lf	31.00 /mh	93	0.01 /lf	0	-	-	-	-	-	-	93	130
	Floor Grating - Aluminum		144.00 sf		233		0	/sf						233	326
05	50- Hose Racks														
	Hose Racks	5001.130	9.00 ea	31.00 /mh	837	/ea		-	-	-	-	-	-	837	1,172
	Hose Racks		1.00 ea		837			/ea						837	1,172
05	50- Stairs														
	Aluminum Stairs - 2 Platform - 20' Tall	5001.100	26.00 rs	31.00 /mh	2,418	0.01 /rs	0	-	-	-	-	-	-	2,418	3,385
	Epoxy Anchor 5/8 x 7in - Floor	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh		60.00 /cf	60	-	-	-	-	-	-	60	60

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Stairs														
	11 GA AL Plate - Riser	5124.005	26.00 ea	31.00 /mh	0	0.01 /lb s	2	-	-	-	-	-	-	2	2
	Erect AL 8x7.02 I Beams	5120.008	1.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchors for Grating Angle	5001.120	5.00 ea	31.00 /mh	19	5.00 /ea	25	-	-	-	-	-	-	44	52
	Grating Angle - Bolt on	5001.120	7.00 lf	31.00 /mh	54	0.01 /lf	0	-	-	-	-	-	-	54	76
	Erect AL I 12 Beams	5120.012	1.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchor Bolts 3/4" SST 7.5 - Into Concrete	6090.500	28.00 ea	31.00 /mh	87	6.00 /ea	168	-	-	-	-	-	-	255	290
	SST Self Tapping Tek Screw 1" Long	7460.100	182.00 ea	31.00 /mh	0	0.50 /ea	97	-	-	-	-	-	-	97	97
	Neoprene Sheets	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	Aluminum 3 Line Rail	5001.115	32.00 lf	31.00 /mh	1,488	0.01 /lf	0	-	-	-	-	-	-	1,488	2,084
	Anchors for Handrail	5001.115	22.00 ea	31.00 /mh	85	5.00 /ea	110	-	-	-	-	-	-	195	229
	Stairs		1.00 ea		4,173		503	/ea						4,677	6,346
05	50- Stairs - to Screw Press Platform														
	Aluminum Stairs - 2 Platform - 9'-2"	5001.100	10.00 rs	31.00 /mh	1,550	0.01 /rs	0	-	-	-	-	-	-	1,550	2,170
	Epoxy Anchor 5/8 x 7in	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate -Half Riser	5124.005	10.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Anchor Bolt 3/4 SS - Stringer to Platform Beam	5001.063	4.00 ea	31.00 /mh	12	0.01 /ea	0	-	-	-	-	-	-	12	17
	Self Tapping Tex Screw 1" long for Half Riser	7460.100	70.00 ea	31.00 /mh	0	0.50 /ea	37	-	-	-	-	-	-	37	37
	Aluminum 3 Line Rail	5001.115	21.00 lf	31.00 /mh	977	0.01 /lf	0	-	-	-	-	-	-	977	1,367
	Anchors for Handrail	5001.115	17.00 ea	31.00 /mh	66	5.00 /ea	85	-	-	-	-	-	-	151	177
	Stairs - to Screw Press Platform		1.00 ea		2,741		208	/ea						2,949	4,045
05	50- Ladder														
	Ladder - 2'	5001.140	3.00 ea	31.00 /mh	744	0.00 /ea	0	-	-	-	-	-	-	744	1,042
	Anchors for Ladder	5001.140	8.00 ea	31.00 /mh	31	5.00 /ea	40	-	-	-	-	-	-	71	83
	Ladder		1.00 ea		775		40	/ea						815	1,125
05	50- Screw Press Platform														
	Erect AL L3x3 - Column	5120.004	24.00 ea	31.00 /mh	2,604	-	-	-	-	-	-	-	-	2,604	3,646
	Epoxy Anchor 5/8 x 7in SS 316 for Columns	5001.054	48.00 ea	31.00 /mh	149	6.00 /ea	288	-	-	-	-	-	-	437	496
	Erect C8 Beams	5120.004	22.00 ea	31.00 /mh	2,387	-	-	-	-	-	-	-	-	2,387	3,342
	Beam Connection Bolts	15060.476	104.00 ea	-	-	0.01 /ea	1	-	-	-	-	-	-	1	1
	Alum Floor Grating 1.25"	5001.120	140.00 sf	31.00 /mh	434	0.01 /sf	1	-	-	-	-	-	-	435	609
	Screw Press Platform		1.00 ea		5,574		290	/ea						5,864	8,094
05	50- Dumpster Rails														
	PL 1/2"x 62' Long x 1'-10" Wide - Rear Wheel	5001.130	2.00 ea	31.00 /mh	6,324	0.01 /ea	0	-	-	-	-	-	-	6,324	8,854
	Non Shrink Grout	3601.100	102.00 cf	31.00 /mh	4,743	60.00 /cf	6,120	-	-	-	-	-	-	10,863	12,760
	Epoxy Anchor 5/8 x 8-1/2in SS 316	5001.054	124.00 ea	31.00 /mh	384	6.00 /ea	744	-	-	-	-	-	-	1,128	1,282
	PL 1/2"x1'x 56'-3" - Front Wheel	5124.005	2.00 ea	31.00 /mh	6,324	0.01 /lb s	0	-	-	-	-	-	-	6,324	8,854
	Non Shrink Grout	3601.100	17.00 cf	31.00 /mh	791	60.00 /cf	1,020	-	-	-	-	-	-	1,811	2,127
	Epoxy Anchor 5/8 x 8-1/2in SS 316	5001.054	112.00 ea	31.00 /mh	347	6.00 /ea	672	-	-	-	-	-	-	1,019	1,158
	Field Welding - Stainless	5000.985	24.00 hrs	31.00 /mh	744	/hr s		115.00 /hrs	2,760	/hrs		-	-	3,504	3,802
	Dumpster Rails		1.00 ea		19,657		8,556	2,760.01 /ea	2,760					30,974	38,836
05	60- 6' x 4' Hatch														
	Access Hatch Bilco JD2 6' X 4'	5001.110	1.00 ea	31.00 /mh	992	0.01 /ea	0	-	-	-	-	-	-	992	1,389
	Set Angle	3150.710	20.00 LF	31.00 /mh	62	0.00 /L F	0	-	-	-	-	-	-	62	87
	6' x 4' Hatch		2.00 ea		1,054		0	/ea						1,054	1,476
	Misc. Metals				36,718		9,934		2,760					49,413	64,100
	350 Step Feed Process Building				36,718		9,934	/LS	2,760					49,413	64,100
400	Orbal Anaerobic Reactor														
	Misc. Metals														
05	32- Railings Aluminum														
	Alum Handrail	5001.115	39.00 lf	31.00 /mh	1,088	0.01 /lf	0	-	-	-	-	-	-	1,088	1,524
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	39.00 ea	31.00 /mh	121	5.00 /ea	195	-	-	-	-	-	-	316	364
	Toe Board	5124.030	39.00 lf	31.00 /mh	0	0.01 /lb s	48	-	-	-	-	-	-	48	48
	Railings Aluminum		90.00 lf		1,209		243	/lf						1,452	1,936
05	50- Stairs To Grating														
	Aluminum Stairs - 2 Platform - 7.5' Tall	5001.100	12.00 rs	31.00 /mh	1,488	0.01 /rs	0	-	-	-	-	-	-	1,488	2,083
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate -Half Riser	5124.005	12.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Anchor Bolt 3/4 SS - Stringer to Bridge Beam	5001.063	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Self Tapping Tex Screw 1" long for Half Riser	7460.100	84.00 ea	31.00 /mh	0	0.50 /ea	45	-	-	-	-	-	-	45	45
	Aluminum 3 Line Rail	5001.115	31.00 lf	31.00 /mh	1,442	0.01 /lf	0	-	-	-	-	-	-	1,442	2,018

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Stairs To Grating														
	Anchors for Handrail	5001.115	20.00 ea	31.00 /mh	78	5.00 /ea	100	-	-	-	-	-	-	178	209
	Stairs To Grating		1.00 ea		3,143		254	/ea						3,398	4,655
	Misc. Metals				4,352		497							4,850	6,591
	400 Orbal Anaerobic Reactor				4,352		497	/LS						4,850	6,591
550 UV	and Digester Blower Building														
	Misc. Metals														
05	43- AL Grating - 2"														
	Alum Floor Grating 2"	5001.120	433.00 sf	31.00 /mh	2,416	0.01 /sf	4	-	-	-	-	-	-	2,420	3,387
	Grating Angle - Bolt on 3x3x1/4	5001.120	300.00 lf	31.00 /mh	3,255	0.01 /lf	3	-	-	-	-	-	-	3,258	4,560
	Anchor Bolt 5/8x6 SS 316	5001.064	189.00 ea	31.00 /mh	293	6.00 /ea	1,134	-	-	-	-	-	-	1,427	1,544
	Erect Steel Channel 6"	5122.406	8.00 ea	31.00 /mh	1,488	-	-	-	-	/ea	-	-	-	1,488	2,083
	AL 16x4.03 Beams - 6'10" Long	5120.016	4.00 ea	31.00 /mh	1,240	-	-	-	-	-	-	-	-	1,240	1,736
	Anchor Bolts 3/4" SST - For Beams	6090.500	32.00 ea	31.00 /mh	99	6.00 /ea	192	-	-	-	-	-	-	291	331
	AL Grating - 2"		433.00 sf		8,791		1,333	/sf						10,125	13,641
05	50- Hose Racks														
	Hose Racks	5001.130	1.00 ea	31.00 /mh	93	/ea		-	-	-	-	-	-	93	130
	Hose Racks		1.00 ea		93			/ea						93	130
05	50- 1/2" Plates for Future														
	Steel Plate 1/4" (QTY 1)	5124.005	1.00 ea	31.00 /mh	248	0.01 /lb s	0	-	-	-	-	-	-	248	347
	Anchor Bolts 1/2" 316 SST 5" Long	6090.500	8.00 ea	31.00 /mh	25	5.00 /ea	40	-	-	-	-	-	-	65	75
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	1/2" Plates for Future		1.00 ea		282		56	/ea						338	451
	Misc. Metals				9,166		1,389							10,556	14,222
	550 UV and Digester Blower Building				9,166		1,389	/LS						10,556	14,222
600 Aerobic	Digester 5 and 6														
	Misc. Metals														
05	32- Railings Aluminum														
	Alum Handrail	5001.115	230.00 lf	31.00 /mh	6,417	0.01 /lf	2	-	-	-	-	-	-	6,419	8,986
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	230.00 ea	31.00 /mh	357	5.00 /ea	1,150	-	-	-	-	-	-	1,507	1,649
	Fall Protection	1116.100	1.00 ls	-	-	-	-	-	-	/ls	-	-	-		
	Neoprene	7100.100	60.00 lf	31.00 /mh	186	5.00 /lf	321	-	-	-	-	-	-	507	581
	Skyjack/Genie 19' Scissor Lift (Requires Power Source)	1900.300	1.00 mnth	-	-	-	-	-	-	800.00 /mnth	800	100.00 /mnth	100	900	916
	Toe Board	5124.030	230.00 lf	31.00 /mh		0.01 /lb s	282	-	-	-	-	-	-	282	282
	Railings Aluminum		230.00 lf		6,960		1,755	/lf			800		100	9,615	12,414
05	45- AL Checkered Plate - 3/8" Thick														
	Checkered Plate 3/8"	5001.122	30.00 sf	31.00 /mh	1,163	0.01 /sf	0	-	-	-	-	-	-	1,163	1,628
	SS Grating Angle - Embed	5001.145	32.00 lf	31.00 /mh	347	0.01 /lf	0	-	-	-	-	-	-	348	486
	1/4" SS Flat Head Screws w/ (2) Nuts	6090.500	8.00 ea	31.00 /mh		2.00 /ea	16	-	-	-	-	-	-	16	16
	AL Checkered Plate - 3/8" Thick		30.00 sf		1,510		17	/sf						1,526	2,130
05	50- Stairs - North														
	Aluminum Stairs - 2 Platform -8'-3" Tall	5001.100	9.00 rs	31.00 /mh	1,535	0.01 /rs	0	-	-	-	-	-	-	1,535	2,148
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate - Half Riser	5124.005	9.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	43	0.01 /lf	0	-	-	-	-	-	-	43	61
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	16	6.00 /ea	30	-	-	-	-	-	-	46	52
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tek Screw 1" Long for Half Riser	7460.100	63.00 ea	31.00 /mh	0	0.50 /ea	34	-	-	-	-	-	-	34	34
	Aluminum 3 Line Rail	5001.115	27.00 lf	31.00 /mh	1,256	0.01 /lf	0	-	-	-	-	-	-	1,256	1,758
	Anchors for Handrail	5001.115	26.00 ea	31.00 /mh	101	5.00 /ea	130	-	-	-	-	-	-	231	271
	Stairs - North		1.00 ea		3,598		343	/ea						3,940	5,379
05	50- Stairs - East														
	Aluminum Stairs - 2 Platform - 20' Tall	5001.100	10.00 rs	31.00 /mh	1,705	0.01 /rs	0	-	-	-	-	-	-	1,705	2,387
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	6	6.00 /ea	24	-	-	-	-	-	-	30	33
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh		60.00 /cf	60	-	-	-	-	-	-	60	60
	8 GA AL Plate - Half Riser	5124.005	10.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	31	0.01 /lf	0	-	-	-	-	-	-	31	43
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh	217	-	-	-	-	-	-	-	-	217	304
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	31	6.00 /ea	30	-	-	-	-	-	-	61	73
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	25	6.00 /ea	24	-	-	-	-	-	-	49	59

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Stairs - East														
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	25	6.00 /ea	24	-	-	-	-	-	-	49	59
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tek Screw 1" Long for Half Riser	7460.100	70.00 ea	31.00 /mh	0	0.50 /ea	37	-	-	-	-	-	-	37	37
	Aluminum 3 Line Rail	5001.115	29.00 lf	31.00 /mh	1,349	0.01 /lf	0	-	-	-	-	-	-	1,349	1,888
	Anchors for Handrail	5001.115	26.00 ea	31.00 /mh	101	5.00 /ea	130	-	-	-	-	-	-	231	271
	Stairs - East		1.00 ea		3,994		347	/ea						4,341	5,939
05	50- Special Pipe Supports														
	Install Large Pipe Supports	5001.130	11.00 ea	31.00 /mh	6,820	/ea		-	-	-	-	-	-	6,820	9,548
	Set Anchor Bolts and supply	3150.700	88.00 ea	31.00 /mh	2,728	25.00 /ea	2,200	-	-	-	-	-	-	4,928	6,019
	Special Pipe Supports		1.00 ea		9,548		2,200	/ea						11,748	15,567
05	60- 6' x 4' Hatch														
	Install Access Hatch	5001.110	2.00 ea	31.00 /mh	1,984	0.01 /ea	0	-	-	-	-	-	-	1,984	2,778
	Set Angle	3150.710	40.00 LF	31.00 /mh	124	0.01 /L F	0	-	-	-	-	-	-	124	174
	6' x 4' Hatch		2.00 ea		2,108		0	/ea						2,108	2,952
	Misc. Metals				27,717		4,662				800		100	33,279	44,382
	600 Aerobic Digester 5 and 6				27,717		4,662	/LS			800		100	33,279	44,382
650	Existing Digester 1 to 4														
	Digester 1&2														
05	32- Railings Aluminum														
	Alum Handrail	5001.115	135.00 lf	31.00 /mh	3,767	0.01 /lf	1	-	-	-	-	-	-	3,768	5,274
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	135.00 ea	31.00 /mh	419	5.00 /ea	675	-	-	-	-	-	-	1,094	1,261
	Fall Protection	1116.100	1.00 ls	-	-	-	-	-	-	/ls		-	-		
	Neoprene	7100.100	17.00 lf	31.00 /mh	53	5.00 /lf	91	-	-	-	-	-	-	144	165
	Skyjack/Genie 19' Scissor Lift (Requires Power Source)	1900.300	1.00 mnth	-	-	-	-	-	-	800.00 /mnth	800	100.00 /mnth	100	900	916
	Toe Board	5124.030	135.00 lf	31.00 /mh	0	0.01 /lb s	165	-	-	-	-	-	-	165	165
	Railings Aluminum		90.00 lf		4,238		933	/lf			800		100	6,070	7,782
05	50- Stairs - South														
	Aluminum Stairs - 2 Platform - 7'-4" Tall	5001.100	9.00 rs	31.00 /mh	1,535	0.01 /rs	0	-	-	-	-	-	-	1,535	2,148
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate - Half Riser	5124.005	9.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	43	0.01 /lf	0	-	-	-	-	-	-	43	61
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh	217	-	-	-	-	-	-	-	-	217	304
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	31	6.00 /ea	30	-	-	-	-	-	-	61	73
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	25	6.00 /ea	24	-	-	-	-	-	-	49	59
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	25	6.00 /ea	24	-	-	-	-	-	-	49	59
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tek Screw 1" Long for Half Riser	7460.100	63.00 ea	31.00 /mh	0	0.50 /ea	34	-	-	-	-	-	-	34	34
	Aluminum 3 Line Rail	5001.115	28.00 lf	31.00 /mh	1,302	0.01 /lf	0	-	-	-	-	-	-	1,302	1,823
	Anchors for Handrail	5001.115	26.00 ea	31.00 /mh	101	5.00 /ea	130	-	-	-	-	-	-	231	271
	Stairs - South		1.00 ea		3,920		343	/ea						4,263	5,831
	Digester 1&2				8,158		1,276				800		100	10,333	13,612
	Digester 3&4														
05	32- Railings Aluminum														
	Alum Handrail	5001.115	226.00 lf	31.00 /mh	6,305	0.01 /lf	2	-	-	-	-	-	-	6,308	8,830
	Epoxy Anchor 1/2 x 6in SS 316	5001.054	226.00 ea	31.00 /mh	701	5.00 /ea	1,130	-	-	-	-	-	-	1,831	2,111
	Fall Protection	1116.100	1.00 ls	-	-	-	-	-	-	/ls		-	-		
	Neoprene Sheets	7100.100	29.00 sf	31.00 /mh	90	5.00 /sf	155	-	-	-	-	-	-	245	281
	Railings Aluminum		90.00 lf		7,096		1,287	/lf						8,383	11,222
05	45- AL Checkered Plate - 3/8" Thick														
	Checkered Plate 3/8"	5001.122	30.00 sf	31.00 /mh	1,116	0.01 /sf	0	-	-	-	-	-	-	1,116	1,563
	SS Grating Angle - Embed	5001.145	32.00 lf	31.00 /mh	347	0.01 /lf	0	-	-	-	-	-	-	348	486
	1/4" SS Flat Head Screws w/ (2) Nuts	6090.500	8.00 ea	31.00 /mh		2.00 /ea	16	-	-	-	-	-	-	16	16
	AL Checkered Plate - 3/8" Thick		587.00 sf		1,463		17	/sf						1,480	2,065
05	50- Hose Racks														
	Hose Racks	5001.130	2.00 ea	31.00 /mh	186	/ea		-	-	-	-	-	-	186	260
	Hose Racks		1.00 ea		186			/ea						186	260
05	50- Stairs - South														
	Aluminum Stairs - 2 Platform - 6'-5" Tall	5001.100	8.00 rs	31.00 /mh	1,364	0.01 /rs	0	-	-	-	-	-	-	1,364	1,910
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate - Half Riser	5124.005	8.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	43	0.01 /lf	0	-	-	-	-	-	-	43	61

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Stairs - South														
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh	217	-	-	-	-	-	-	-	-	217	304
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	31	6.00 /ea	30	-	-	-	-	-	-	61	73
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	25	6.00 /ea	24	-	-	-	-	-	-	49	59
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	25	6.00 /ea	24	-	-	-	-	-	-	49	59
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tek Screw 1" Long for Half Riser	7460.100	56.00 ea	31.00 /mh	0	0.50 /ea	30	-	-	-	-	-	-	30	30
	Aluminum 3 Line Rail	5001.115	26.00 lf	31.00 /mh	1,209	0.01 /lf	0	-	-	-	-	-	-	1,209	1,693
	Anchors for Handrail	5001.115	26.00 ea	31.00 /mh	101	5.00 /ea	130	-	-	-	-	-	-	231	271
	Stairs - South		1.00 ea		3,656		339	/ea						3,995	5,458
05	50- Stairs - North														
	Aluminum Stairs - 2 Platform -12'-10"	5001.100	14.00 rs	31.00 /mh	2,387	0.01 /rs	0	-	-	-	-	-	-	2,387	3,342
	Epoxy Anchor 5/8 x 7in EG	5001.050	4.00 ea	31.00 /mh	12	6.00 /ea	24	-	-	-	-	-	-	36	41
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	124	60.00 /cf	60	-	-	-	-	-	-	184	234
	8 GA AL Plate - Half Riser	5124.005	14.00 ea	31.00 /mh		0.01 /lb s	1	-	-	-	-	-	-	1	1
	Erect AL 8x6.35 I Beams	5120.008	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Grating Angle - Embed	5001.120	4.00 lf	31.00 /mh	43	0.01 /lf	0	-	-	-	-	-	-	43	61
	Erect AL PL 3/8x3x3	5120.012	2.00 ea	31.00 /mh	217	-	-	-	-	-	-	-	-	217	304
	Anchor Bolts 3/4" SST for PL	6090.500	5.00 ea	31.00 /mh	31	6.00 /ea	30	-	-	-	-	-	-	61	73
	Anchor Bolt 3/4x6.5 SS - Conn. to Concrete	5001.063	4.00 ea	31.00 /mh	25	5.00 /ea	20	-	-	-	-	-	-	45	55
	Anchor Bolt 3/4 SS - Stringer to Beam	5001.063	4.00 ea	31.00 /mh	25	5.00 /ea	20	-	-	-	-	-	-	45	55
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	SST Self Tapping Tek Screw 1" Long for Half Riser	7460.100	98.00 ea	31.00 /mh	0	0.50 /ea	52	-	-	-	-	-	-	52	52
	Aluminum 3 Line Rail	5001.115	42.00 lf	31.00 /mh	1,953	0.01 /lf	0	-	-	-	-	-	-	1,953	2,735
	Anchors for Handrail	5001.115	36.00 ea	31.00 /mh	140	5.00 /ea	180	-	-	-	-	-	-	320	375
	Stairs - North		1.00 ea		5,462		404	/ea						5,866	8,051
05	50- Crossover Platform														
	Aluminum Stairs - Crossover Platform 3'-6" Platform	5001.100	6.00 rs	31.00 /mh	1,116	0.01 /rs	0	-	-	-	-	-	-	1,116	1,562
	Epoxy Anchor 5/8 x 7in EG	5001.050	16.00 ea	31.00 /mh	99	6.00 /ea	96	-	-	-	-	-	-	195	235
	Non Shrink Grout	3601.100	1.00 cf	31.00 /mh	248	60.00 /cf	60	-	-	-	-	-	-	308	407
	Neoprene	7100.100	3.00 lf	31.00 /mh	9	5.00 /lf	16	-	-	-	-	-	-	25	29
	Crossover Platform		1.00 ea		1,473		172	/ea						1,645	2,234
05	60- 6' x 4' Hatch														
	Install Access Hatch	5001.110	2.00 ea	31.00 /mh	1,984	0.01 /ea	0	-	-	-	-	-	-	1,984	2,778
	Set Angle	3150.710	40.00 LF	31.00 /mh	124	0.01 /L F	0	-	-	-	-	-	-	124	174
	6' x 4' Hatch		2.00 ea		2,108		0	/ea						2,108	2,952
	Digester 3&4				21,444		2,220							23,664	32,242
Misc.	Metals														
05	50- Special Pipe Supports														
	Install Large Pipe Supports	5001.130	3.00 ea	31.00 /mh	1,860	/ea		-	-	-	-	-	-	1,860	2,604
	Set Anchor Bolts and supply	3150.700	24.00 ea	31.00 /mh	744	25.00 /ea	600	-	-	-	-	-	-	1,344	1,642
	Special Pipe Supports		1.00 ea		2,604		600	/ea						3,204	4,246
	Misc. Metals				2,604		600							3,204	4,246
	650 Existing Digester 1 to 4				32,206		4,095	/LS			800		100	37,201	50,100
	055000 Metal Fabrication				309,807		1,061,430		8,454		51,150		13,225	1,444,066	1,569,012
061000	Rough Carpentry														
100	Headworks														
Wood															
0600	2- Plywood "cap" at Top of Masonry Walls														
	Blocking Plywood 3/4" CDX 1.5' Wide	6160.500	724.00 sf	31.00 /mh	3,367	2.00 /sf	1,549	-	-	-	-	-	-	4,916	6,263
	Bolt Connectors 1/2"	6090.700	121.00 ea	31.00 /mh	750	8.00 /ea	968	-	-	-	-	-	-	1,718	2,018
	Plywood "cap" at Top of Masonry Walls		225.00 lf		4,117		2,517	/lf						6,634	8,281
0600	2- Blocking for Roof Hatch														
	PT Blocking	6116.140	52.00 lf	31.00 /mh	322	2.00 /lf	111	-	-	-	-	-	-	434	563
	Screws	6090.700	26.00 ea	31.00 /mh	0	0.25 /ea	7	-	-	-	-	-	-	7	7
	Blocking for Roof Hatch		13.00 lf		322		118	/lf						440	569
	Wood				4,439		2,635							7,074	8,850
	100 Headworks				4,439		2,635	/LS						7,074	8,850
700	Administration Building														
Wood															
0600	3- Blocking														
	Blocking	6116.160	760.00 lf	31.00 /mh	4,241	2.00 /lf	1,626	-	-	-	-	-	-	5,867	7,564
	Screws	6090.700	760.00 ea	31.00 /mh	0	0.25 /ea	190	-	-	-	-	-	-	190	190
	Blocking		50.00 lf		4,241		1,816	/lf						6,057	7,754
	Wood				4,241		1,816							6,057	7,754

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	700 Administration Building				4,241		1,816	/LS						6,057	7,754
	750 Lab and Control Building														
	Wood														
	0600 3- Blocking														
	Blocking	6116.160	50.00 lf	31.00 /mh	465	2.00 /lf	107	-	-	-	-	-	-	572	758
	Screws	6090.700	50.00 ea	31.00 /mh	0	0.25 /ea	13	-	-	-	-	-	-	13	13
	Blocking		50.00 lf		465		120	/lf						585	771
	Wood				465		120							585	771
	750 Lab and Control Building				465		120	/LS						585	771
	061000 Rough Carpentry				9,145		4,571							13,716	17,374
064100	Architectural Wood Casework														
	700 Administration Building														
	GEN General														
	12-01 Casework (New Admin Bldg)														
	Sub - Casework	12310.100	1.00 ls	-	-	-	-	56,123.00 /ls	56,123	-	-	-	-	56,123	56,123
	Base Cabinets Wood	12350.100	22.00 lf	31.00 /mh	512	0.00 /lf	0	-	-	-	-	-	-	512	716
	Wall Cabinets Wood	12350.100	22.00 lf	31.00 /mh	512	0.00 /lf	0	-	-	-	-	-	-	512	716
	Countertops Laminated Plastic	12350.100	33.00 lf	31.00 /mh	1,535	0.00 /lf	0	-	-	-	-	-	-	1,535	2,148
	Casework (New Admin Bldg)		1.00 LS		2,558			56,123.00 /LS	56,123					58,681	59,704
	GEN General				2,558				56,123					58,681	59,704
	Wood														
	0606 8- Window Sill														
	Window Sill 1'-6"	6114.600	2.00 ea	31.00 /mh	248	50.00 /ea	107	-	-	-	-	-	-	355	454
	Window Sill 4'-0"	6114.700	7.00 ea	31.00 /mh	868	100.00 /ea	749	-	-	-	-	-	-	1,617	1,964
	Window Sill 12'-0	7260.100	1.00 ea	31.00 /mh	372	400.00 /ea	428	-	-	-	-	-	-	800	949
	Window Sill				1,488		1,284	/lf						2,772	3,367
	Wood				1,488		1,284							2,772	3,367
	700 Administration Building				4,046		1,284	/LS	56,123					61,453	63,071
	750 Lab and Control Building														
	Casework														
	12-01 Casework (Existing Lab)														
	Sub - Casework	12310.100	1.00 ls	-	-	-	-	0.01 /ls	0	-	-	-	-	0	0
	Base Cabinets Enamel Steel	12350.100	21.00 lf	31.00 /mh	488	0.00 /lf	0	-	-	-	-	-	-	488	684
	Wall Cabinets Enamel Steel	12350.100	6.00 lf	31.00 /mh	279	0.00 /lf	0	-	-	-	-	-	-	279	391
	Countertops Laminated Plastic	12350.100	21.00 lf	31.00 /mh	977	0.00 /lf	0	-	-	-	-	-	-	977	1,367
	Casework (Existing Lab)		1.00 LS		1,744			0.01 /LS	0					1,744	2,441
	Casework				1,744				0					1,744	2,441
	750 Lab and Control Building				1,744			/LS	0					1,744	2,441
	064100 Architectural Wood Casework				5,789		1,284		56,123					63,196	65,512
071113	Bituminous Dampproofing														
	100 Headworks														
	Waterproofing														
	07 3- Dampproofing (mci)														
	Brush on Rubber	7110.100	765.00 sf	31.00 /mh	711	0.50 /sf	409	-	-	-	-	-	-	1,121	1,405
	Dampproofing (mci)		996.00 sf		711		409	/sf						1,121	1,405
	Waterproofing				711		409							1,121	1,405
	100 Headworks				711		409	/LS						1,121	1,405
	350 Step Feed Process Building														
	Waterproofing														
	07 3- Dampproofing (mci)														
	Brush on Rubber	7110.100	996.00 sf	31.00 /mh	926	0.50 /sf	533	-	-	-	-	-	-	1,459	1,830
	Dampproofing (mci)		996.00 sf		926		533	/sf						1,459	1,830
	Waterproofing				926		533							1,459	1,830
	350 Step Feed Process Building				926		533	/LS						1,459	1,830
	550 UV and Digester Blower Building														
	Waterproofing														
	07 3- Dampproofing (mci)														
	Brush on Rubber	7110.100	840.00 sf	31.00 /mh	781	0.50 /sf	449	-	-	-	-	-	-	1,231	1,543
	Dampproofing (mci)		996.00 sf		781		449	/sf						1,231	1,543
	Waterproofing				781		449							1,231	1,543
	550 UV and Digester Blower Building				781		449	/LS						1,231	1,543
	700 Administration Building														
	Waterproofing														
	07 3- Dampproofing (mci)														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
07	3- Damproofing (mci)														
	Brush on Rubber	7110.100	705.00 sf	31.00 /mh	656	0.50 /sf	377	-	-	-	-	-	-	1,033	1,295
	Damproofing (mci)		996.00 sf		656		377	/sf						1,033	1,295
	Waterproofing				656		377							1,033	1,295
	700 Administration Building				656		377	/LS						1,033	1,295
	071113 Bituminous Dampproofing				3,075		1,769							4,843	6,073
071700	Bentonite Waterproofing														
	350 Step Feed Process Building														
	Waterproofing														
07	2- Bentonite Waterproofing - Slab														
	Bentonite Panels Slab - 2,254 SF	7100.100	1.00 ls	31.00 /mh		0.01 /ls	0	-	-	-	-	-	-	0	0
	Staples Seams every 12"	3150.200	1.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Seam Tape - 21 Seams	7260.100	616.00 lf	31.00 /mh	0	0.00 /lf	0	-	-	-	-	-	-	0	0
	Weather Protect Bentonite Waterproofing (all Step Feed)	1572.100	1.00 mnth	31.00 /mh	6,200	2,500.00 /mnt h	2,500	-	-	-	-	-	-	8,700	11,180
	Influent Pump Station slab 1 ls 440 sf cover board for slab	7110.100	1.00 ls	31.00 /mh		3,500.00 /ls	3,745	-	-	-	-	-	-	3,745	3,745
	Bentonite sub	7100.100	1.00 ls	-	-	-	-	120,000.00 /ls	120,000	-	-	-	-	120,000	120,000
	Bentonite Waterproofing - Slab		2,212.00 sf		6,200		6,245	54.25 /sf	120,000					132,445	134,925
07	2- Bentonite Waterproofing - Walls														
	Bentonite Panels Walls - 2,615 SF	7100.100	1.00 ls	31.00 /mh		0.01 /ls	0	-	-	-	-	-	-	0	0
	Drainage Board - 2,615	7110.100	1.00 ls	31.00 /mh		0.01 /ls	0	-	-	-	-	-	-	0	0
	Nail every 24", Staple every 6"	3150.200	1.00 ea	31.00 /mh		/ea		-	-	-	-	-	-		
	Influent Pump Station Walls 1 ls 2352 SF	7110.100	1.00 ls	31.00 /mh		0.01 /ls	0	-	-	-	-	-	-	0	0
	Bentonite Waterproofing - Walls		2,212.00 sf				0	/sf						0	0
	Waterproofing				6,200		6,245		120,000					132,445	134,925
	350 Step Feed Process Building				6,200		6,245	/LS	120,000					132,445	134,925
	071700 Bentonite Waterproofing				6,200		6,245		120,000					132,445	134,925
072100	Thermal Insulation														
	100 Headworks														
	Rigid Insulation														
07	6- Insulation - Rigid (mci)														
	Rigid Insulation 2.0 " @ Wall	7210.400	765.00 sf	31.00 /mh	711	2.00 /sf	1,637	-	-	-	-	-	-	2,349	2,633
	Rigid Wall Insulation Adhesive	7210.400	765.00 sf	31.00 /mh	0	0.15 /sf	115	-	-	-	-	-	-	115	115
	Insulation - Rigid (mci)		800.00 sf		712		1,752	/sf						2,464	2,748
	Rigid Insulation				712		1,752							2,464	2,748
	100 Headworks				712		1,752	/LS						2,464	2,748
	350 Step Feed Process Building														
	Rigid Insulation														
07	6- Insulation - Rigid (mci)														
	Rigid Insulation 2.0 " @ Wall	7210.400	996.00 sf	31.00 /mh	926	2.00 /sf	2,131	-	-	-	-	-	-	3,058	3,428
	Rigid Wall Insulation Adhesive	7210.400	996.00 sf	31.00 /mh	0	0.15 /sf	149	-	-	-	-	-	-	150	150
	Insulation - Rigid (mci)		800.00 sf		927		2,281	/sf						3,207	3,578
	Rigid Insulation				927		2,281							3,207	3,578
	350 Step Feed Process Building				927		2,281	/LS						3,207	3,578
	550 UV and Digester Blower Building														
	Rigid Insulation														
07	6- Insulation - Rigid (mci)														
	Rigid Insulation 2.0 " @ Wall	7210.400	840.00 sf	31.00 /mh	781	2.00 /sf	1,798	-	-	-	-	-	-	2,579	2,891
	Rigid Wall Insulation Adhesive	7210.400	840.00 sf	31.00 /mh	0	0.15 /sf	126	-	-	-	-	-	-	126	126
	Insulation - Rigid (mci)		800.00 sf		781		1,924	/sf						2,705	3,018
	Rigid Insulation				781		1,924							2,705	3,018
	550 UV and Digester Blower Building				781		1,924	/LS						2,705	3,018
	700 Administration Building														
	Rigid Insulation														
07	6- Insulation - Rigid (mci)														
	Rigid Insulation 2.0 " @ Wall	7210.400	705.00 sf	31.00 /mh	656	2.00 /sf	1,509	-	-	-	-	-	-	2,164	2,427
	Rigid Wall Insulation Adhesive	7210.400	705.00 sf	31.00 /mh	0	0.15 /sf	106	-	-	-	-	-	-	106	106
	Insulation - Rigid (mci)		800.00 sf		656		1,614	/sf						2,270	2,533
	Rigid Insulation				656		1,614							2,270	2,533
	700 Administration Building				656		1,614	/LS						2,270	2,533
	072100 Thermal Insulation				3,076		7,571							10,646	11,877
072616	Belowgrade Vapor Retarders														
	700 Administration Building														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Waterproofing														
	07 2- Vapor Barrier														
	Vapor Barrier - 3,587 SF	7100.100	1.00 ls	31.00 /mh	496	995.00 /ls	1,065	-	-	-	-	-	-	1,561	1,759
	Perimeter Tape	3150.200	460.00 lf	31.00 /mh	143	0.61 /lf	281	-	-	-	-	-	-	423	480
	Seam Tape - 5 Seams	7260.100	358.00 lf	31.00 /mh	111	0.42 /lf	161	-	-	-	-	-	-	272	316
	Vapor Barrier		2,212.00 sf		750		1,506	/sf						2,256	2,556
	Waterproofing				750		1,506							2,256	2,556
	700 Administration Building				750		1,506	/LS						2,256	2,556
	072616 Belowgrade Vapor Retarders				750		1,506							2,256	2,556
	075323 EPDM Roofing														
	051 Site Civil														
	General														
	0710- Splash Blocks that should have been with roofing														
	Precast Item # 3 SPLASH BLOCKS PRECAST VARIETY	2327.005	8.00 ea	31.00 /mh	496	50.00 /ls	400	-	-	-	-	-	-	896	1,094
	Splash Blocks that should have been with roofing				496		400	/sf						896	1,094
	General				496		400							896	1,094
	051 Site Civil				496		400	/LS						896	1,094
	100 Headworks														
	EPDM Roofing EPDM Roofing														
	0730- Headworks EPDM Roofing														
	Sub - Membrane Roofing (2875 sf)	7530.100	1.00 ls	-	-	-	-	93,758.00 /ls	93,758	-	-	-	-	93,758	93,758
	Sub - Roofing Bond	4000.980	1.00 ls	-	-	-	-			-	-	-	-		
	Headworks EPDM Roofing							/sf	93,758					93,758	93,758
	EPDM Roofing EPDM Roofing								93,758					93,758	93,758
	100 Headworks							/LS	93,758					93,758	93,758
	075323 EPDM Roofing				496		400		93,758					94,654	94,852
	078400 Firestopping														
	100 Headworks														
	Caulking														
	0760- Fire Caulking														
	Caulking 10.3 oz tube 1/8d x 1/4w	7920.300	175.00 lf	31.00 /mh	543	2.00 /lf	385	-	-	-	-	-	-	928	1,144
	Fire Insul	7920.300	1.00 ls	31.00 /mh		250.00 /ls	275	-	-	-	-	-	-	275	275
	Fire Caulking		100.00 lf		543		660	/lf						1,203	1,419
	Caulking				543		660							1,203	1,419
	Firestopping														
	0751- Firestopping - Joists & Beams														
	Firestopping - Void Area	7210.400	26.00 ea	31.00 /mh	1,612	150.00 /ea	4,173	-	-	-	-	-	-	5,785	6,430
	Firestopping - Joists & Beams		0.25 sf		1,612		4,173	/sf						5,785	6,430
	Firestopping				1,612		4,173							5,785	6,430
	100 Headworks				2,155		4,833	/LS						6,988	7,849
	350 Step Feed Process Building														
	Caulking														
	0760- Fire Caulking														
	Caulking 10.3 oz tube 1/8d x 1/4w	7920.300	752.00 lf	31.00 /mh	4,662	2.00 /lf	1,654	-	-	-	-	-	-	6,317	8,182
	Misc Materials	7920.300	1.00 ls	31.00 /mh		750.00 /ls	825	-	-	-	-	-	-	825	825
	Fire Caulking		100.00 lf		4,662		2,479	/lf						7,142	9,007
	Caulking				4,662		2,479							7,142	9,007
	350 Step Feed Process Building				4,662		2,479	/LS						7,142	9,007
	078400 Firestopping				6,817		7,312							14,129	16,856
	079200 Joint Sealants														
	100 Headworks														
	Caulking														
	0760- Caulking - Doors														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	550.00 lf	31.00 /mh	1,705	15.00 /tu be	353	-	-	-	-	-	-	2,058	2,740
	Caulking - Doors		10.00 lf		1,705		353	/lf						2,058	2,740
	0760- Caulking - Masonry														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	936.00 lf	31.00 /mh	5,803	15.00 /tu be	601	-	-	-	-	-	-	6,404	8,725
	Caulking - Masonry		10.00 lf		5,803		601	/lf						6,404	8,725
	Caulking				7,508		954							8,462	11,466
	100 Headworks				7,508		954	/LS						8,462	11,466
	350 Step Feed Process Building														
	Caulking														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0760-	Caulking - Doors														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	787.00 If	31.00 /mh	2,440	15.00 /tube	505	-	-	-	-	-	-	2,945	3,921
	Caulking - Doors		10.00 If		2,440		505	/lf						2,945	3,921
	Caulking				2,440		505							2,945	3,921
	350 Step Feed Process Building				2,440		505	/LS						2,945	3,921
550 UV	and Digester Blower Building														
	Caulking														
0760-	Caulking - Doors														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	321.00 If	31.00 /mh	995	15.00 /tube	206	-	-	-	-	-	-	1,201	1,599
	Caulking - Doors		10.00 If		995		206	/lf						1,201	1,599
	Caulking				995		206							1,201	1,599
	550 UV and Digester Blower Building				995		206	/LS						1,201	1,599
700 Ad	ministration Building														
	Caulking														
0760-	Caulking - Doors														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	645.00 If	31.00 /mh	2,000	15.00 /tube	414	-	-	-	-	-	-	2,414	3,213
	Caulking - Doors		10.00 If		2,000		414	/lf						2,414	3,213
0760-	Caulking - Misc														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	50.00 If	31.00 /mh	155	15.00 /tube	32	-	-	-	-	-	-	187	249
	Caulking - Misc		10.00 If		155		32	/lf						187	249
	Caulking				2,155		446							2,601	3,463
	700 Administration Building				2,155		446	/LS						2,601	3,463
750 Lab	and Control Building														
	Caulking														
0760-	Caulking - Misc														
	Caulking 10.3 oz tube 1/4d x 1/4w	7920.300	30.00 If	31.00 /mh	28	15.00 /tube	19	-	-	-	-	-	-	47	58
	Caulking - Misc		10.00 If		28		19	/lf						47	58
	Caulking				28		19							47	58
	750 Lab and Control Building				28		19	/LS						47	58
	079200 Joint Sealants				13,125		2,131							15,256	20,506
081101	Steel Door Assemblies														
	001 General														
	GEN General														
	0800-1 Hollow Metal Doors Basic														
	Purchase Doors & Frames	8115.100	1.00 ls	-	-	123,000.00 /ls	123,000	-	-	-	-	-	-	123,000	123,000
	Hollow Metal Doors Basic						123,000	/ea						123,000	123,000
	GEN General						123,000							123,000	123,000
	001 General						123,000	/LS						123,000	123,000
100 Head	works														
	OPENINGS														
	0800-1 Hollow Metal Doors														
	Install HM Single Frames & Doors	8110.100	8.00 ea	31.00 /mh	7,936	0.00 /ea	0	-	-	-	-	-	-	7,936	11,110
	Install HM Double Frames and Doors	8110.100	2.00 ea	31.00 /mh	2,976	0.00 /ea	0	-	-	-	-	-	-	2,976	4,166
	Install HM Door Leafs	8110.105	12.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Install Hardware by Leaf	8115.100	12.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Hollow Metal Doors		12.00 ea		10,912			/ea						10,912	15,277
	OPENINGS				10,912									10,912	15,277
	100 Headworks				10,912			/LS						10,912	15,277
350 Step	Feed Process Building														
	OPENINGS														
	0800-1 Hollow Metal Doors														
	Install HM Single Frames & Doors	8110.100	9.00 ea	31.00 /mh	8,928	0.00 /ea	0	-	-	-	-	-	-	8,928	12,499
	Install HM Double Frames and Doors	8110.100	4.00 ea	31.00 /mh	5,952	0.00 /ea	0	-	-	-	-	-	-	5,952	8,333
	Install HM Door Leafs	8110.105	17.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Install Hardware by Leaf	8115.100	17.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Hollow Metal Doors		12.00 ea		14,880			/ea						14,880	20,832
	OPENINGS				14,880									14,880	20,832
	350 Step Feed Process Building				14,880			/LS						14,880	20,832
550 UV	and Digester Blower Building														
	OPENINGS														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0800	00-1 Hollow Metal Doors														
	Install HM Single Frames & Doors	8110.100	3.00 ea	31.00 /mh	2,976	0.00 /ea	0	-	-	-	-	-	-	2,976	4,166
	Install HM Double Frames and Doors	8110.100	4.00 ea	31.00 /mh	5,952	0.00 /ea	0	-	-	-	-	-	-	5,952	8,333
	Install HM Door Leafs	8110.105	11.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Install Hardware by Leaf	8115.100	11.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Hollow Metal Doors		12.00 ea		8,928			/ea						8,928	12,499
	OPENINGS				8,928									8,928	12,499
	550 UV and Digester Blower Building				8,928			/LS						8,928	12,499
700	Administration Building														
	OPENINGS														
0800	00-1 Hollow Metal Doors														
	Install HM Single Frames & Doors	8110.100	15.00 ea	31.00 /mh	14,880	0.00 /ea	0	-	-	-	-	-	-	14,880	20,832
	Install Accordian Door	8110.100	1.00 ea	31.00 /mh	992	0.00 /ea	0	-	-	-	-	-	-	992	1,389
	Install HM Borrow Light Frame	8110.100	3.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Install HM Door Leafs	8110.105	18.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Install Hardware by Leaf	8115.100	18.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	Hollow Metal Doors		12.00 ea		15,872			/ea						15,872	22,221
	OPENINGS				15,872									15,872	22,221
	700 Administration Building				15,872			/LS						15,872	22,221
	081101 Steel Door Assemblies				50,592		123,000							173,592	193,829
083000	Specialty Doors														
001	General														
GEN	General														
0830	Overhead Doors														
	Coiling Doors - Subcontractor	8360.200	1.00 LS	-	-	-	-	103,000.00 /LS	103,000	-	-	-	-	103,000	103,000
	Overhead Doors							/LS	103,000					103,000	103,000
	GEN General								103,000					103,000	103,000
	001 General							/LS	103,000					103,000	103,000
	083000 Specialty Doors								103,000					103,000	103,000
085113	Aluminum Windows														
001	General														
	OPENINGS														
0823	Windows - Aluminum														
	Glazing - Subcontractor	8510.300	1.00 LS	31.00 /mh		0.00 /LS	0	99,969.00 /LS	99,969	-	-	-	-	99,969	99,969
	Windows - Aluminum							/ls	99,969					99,969	99,969
	OPENINGS								99,969					99,969	99,969
	001 General							/LS	99,969					99,969	99,969
	085113 Aluminum Windows								99,969					99,969	99,969
092900	Gypsum Board														
350	Step Feed Process Building														
	Drywall Drywall														
091	9- Drywall Sub														
	Sub - Drywall Process Bld	9250.980	1.00 ls	-	-	-	-	235,000.00 /ls	235,000	-	-	-	-	235,000	235,000
	Drywall Sub		250.00 sf					940.00 /sf	235,000					235,000	235,000
	Drywall Drywall								235,000					235,000	235,000
	350 Step Feed Process Building							/LS	235,000					235,000	235,000
550	UV and Digester Blower Building														
	Drywall Drywall														
091	9- Drywall Sub														
	Sub - Sealant and bottom covering	9250.980	1.00 ls	-	-	-	-	8,500.00 /ls	8,500	-	-	-	-	8,500	8,500
	Drywall Sub		250.00 sf					34.00 /sf	8,500					8,500	8,500
	Drywall Drywall								8,500					8,500	8,500
	550 UV and Digester Blower Building							/LS	8,500					8,500	8,500
700	Administration Building														
	Drywall Drywall														
091	9- Drywall Sub														
	Sub - Insulation	9250.980	1.00 ls	-	-	-	-	25,000.00 /ls	25,000	-	-	-	-	25,000	25,000
	Drywall Sub		250.00 sf					100.00 /sf	25,000					25,000	25,000
	Drywall Drywall								25,000					25,000	25,000
	700 Administration Building							/LS	25,000					25,000	25,000
	092900 Gypsum Board								268,500					268,500	268,500
093000	Tiling														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
700 Administration Building															
Tile Tile															
092 1- Tile															
Sub - Tile Flooring	9680.050	1.00 ls	-	-	-	-	72,000.00 /ls	72,000	-	-	-	-	-	72,000	72,000
Sub - Tile patch at existing	9680.210	1.00 ls	-	-	-	-	3,000.00 /ls	3,000	-	-	-	-	-	3,000	3,000
Tile							/ls	75,000						75,000	75,000
Tile Tile								75,000						75,000	75,000
700 Administration Building							/LS	75,000						75,000	75,000
093000 Tiling								75,000						75,000	75,000
095123 Acoustical Tile Ceilings															
700 Administration Building															
Acoustical Tile Acoustical															
093 1- Acoustical Ceiling															
Sub - Ceiling	9500.980	1.00 ls	-	-	-	-	14,000.00 /ls	14,000	-	-	-	-	-	14,000	14,000
Acoustical Ceiling							/sf	14,000						14,000	14,000
Acoustical Tile Acoustical								14,000						14,000	14,000
700 Administration Building							/LS	14,000						14,000	14,000
095123 Acoustical Tile Ceilings								14,000						14,000	14,000
097701 Fiberglass-Reinforced Plastic (FRP) Panel Walls															
350 Step Feed Process Building															
FRP FRP															
091 1- FRP Panel Walls															
FRP Panel	5001.155	96.00 sf	31.00 /mh	1,488	10.00 /sf	960	-	-	-	-	-	-	-	2,448	3,043
FRP Panel Walls				1,488		960	/lf							2,448	3,043
FRP FRP				1,488		960								2,448	3,043
350 Step Feed Process Building				1,488		960	/LS							2,448	3,043
700 Administration Building															
FRP FRP															
091 1- FRP Panel Walls															
FRP Panel	5001.155	64.00 sf	31.00 /mh	992	10.00 /sf	640	-	-	-	-	-	-	-	1,632	2,029
FRP Panel Walls				992		640	/lf							1,632	2,029
FRP FRP				992		640								1,632	2,029
700 Administration Building				992		640	/LS							1,632	2,029
097701 Fiberglass-Reinforced Plastic (FRP) Panel Walls				2,480		1,600								4,080	5,072
099000 Painting and Coating															
001 General															
Painting Painting															
099-2 Painting and Coatings															
Sub - Special Coatings (national)	9960.100	1.00 ls	-	-	-	-	736,000.00 /ls	736,000	-	-	-	-	-	736,000	736,000
Sub - Coatings Bond	4000.980	1.00 ls	-	-	-	-			-	-	-	-	-		
Painting and Coatings							/sf	736,000						736,000	736,000
Painting Painting								736,000						736,000	736,000
001 General							/LS	736,000						736,000	736,000
099000 Painting and Coating								736,000						736,000	736,000
101400 Signage															
001 General															
Signs Signs															
10-101 Signs															
Supply Sign Package and pipe label	10430.100	1.00 ls	-	-	18,000.00 /ls	18,000	-	-	-	-	-	-	-	18,000	18,000
Misc. Materials To Install Signs	10430.100	1.00 ls	31.00 /mh		2,500.00 /ls	2,500	-	-	-	-	-	-	-	2,500	2,500
Div 10 install signs	2220.040	1.00 ls	31.00 /mh		-	-	-	-	-	-	-	-	-	7,440	10,416
Signs					7,440		20,500	/LS						27,940	30,916
Signs Signs					7,440		20,500							27,940	30,916
001 General					7,440		20,500	/LS						27,940	30,916
101400 Signage					7,440		20,500							27,940	30,916
102800 Toilet and Bath Accessories															
700 Administration Building															
Toilet & Bath Toilet & Bath															
10-102 Bathroom Accessories															
Sub - Bath Accessories Supply only	10810.100	1.00 ls	-	-	-	3,524.00 /ls	3,524	-	-	-	-	-	-	3,524	3,524
Curtain Rods	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	-	124	174
Soap Dispensers	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	-	124	174
Bath Tissue Dispenser Single	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	-	124	174

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
10-	102 Bathroom Accessories														
	TP Dispenser Double	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	124	174
	Paper Towel Dispenser Recessed	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	124	174
	Sanitary Napkin Dispenser	10810.200	1.00 ea	31.00 /mh	62	0.00 /ea	0	-	-	-	-	-	-	62	87
	Bath Mirror Large	10810.200	2.00 ea	31.00 /mh	372	0.00 /ea	0	-	-	-	-	-	-	372	521
	Coat Hooks	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	124	174
	Mop Hooks	10810.200	1.00 ea	31.00 /mh	62	0.00 /ea	0	-	-	-	-	-	-	62	87
	Towel Hooks	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	124	174
	Grab Bars - Handicap Toilet	10810.600	4.00 ea	31.00 /mh	248	250.00 /ea	1,000	-	-	-	-	-	-	1,248	1,347
	Grab Bars - Handicap Shower	10810.600	2.00 ea	31.00 /mh	124	250.00 /ea	500	-	-	-	-	-	-	624	674
	Handicap Shower Bench	10500.100	2.00 ea	31.00 /mh	248	250.00 /ea	500	-	-	-	-	-	-	748	847
	Shower Curtain	10185.100	2.00 ea	31.00 /mh	124	65.00 /ea	130	-	-	-	-	-	-	254	304
	Locker Room Benches 48"	10500.100	2.00 ea	31.00 /mh	248	250.00 /ea	500	-	-	-	-	-	-	748	847
	Soap Dish	10810.200	2.00 ea	31.00 /mh	124	0.00 /ea	0	-	-	-	-	-	-	124	174
	Paper Towel Dispenser Surface	10810.200	1.00 ea	31.00 /mh	62	0.00 /ea	0	-	-	-	-	-	-	62	87
	Bathroom Accessories				2,542		2,630	/LS	3,524					8,696	9,713
	Toilet & Bath Toilet & Bath				2,542		2,630		3,524					8,696	9,713
	700 Administration Building				2,542		2,630	/LS	3,524					8,696	9,713
	102800 Toilet and Bath Accessories				2,542		2,630		3,524					8,696	9,713
104400	Fire Protection Specialties and Safety Equipment														
100	Headworks														
	Fire Extinguisher Fire Extinguisher														
10-	101 Fire Extinguisher														
	Fire Extinguisher Dry 10 lbs	10520.200	4.00 ea	31.00 /mh	248	175.00 /ea	700	-	-	-	-	-	-	948	1,047
	Fire Extinguisher CO2 15 lbs	10520.200	2.00 ea	31.00 /mh	124	200.00 /ea	400	-	-	-	-	-	-	524	574
	Fire Extinguisher				372		1,100	/LS						1,472	1,621
	Fire Extinguisher Fire Extinguisher				372		1,100							1,472	1,621
	100 Headworks				372		1,100	/LS						1,472	1,621
350	Step Feed Process Building														
	Fire Extinguisher Fire Extinguisher														
10-	101 Fire Extinguisher														
	Fire Extinguisher Dry 10 lbs	10520.200	7.00 ea	31.00 /mh	434	175.00 /ea	1,225	-	-	-	-	-	-	1,659	1,833
	Fire Extinguisher CO2 15 lbs	10520.200	1.00 ea	31.00 /mh	62	200.00 /ea	200	-	-	-	-	-	-	262	287
	Fire Extinguisher				496		1,425	/LS						1,921	2,119
	Fire Extinguisher Fire Extinguisher				496		1,425							1,921	2,119
	350 Step Feed Process Building				496		1,425	/LS						1,921	2,119
550	UV and Digester Blower Building														
	Fire Extinguisher Fire Extinguisher														
10-	101 Fire Extinguisher														
	Fire Extinguisher Dry 10 lbs	10520.200	4.00 ea	31.00 /mh	248	175.00 /ea	700	-	-	-	-	-	-	948	1,047
	Fire Extinguisher CO2 15 lbs	10520.200	2.00 ea	31.00 /mh	124	200.00 /ea	400	-	-	-	-	-	-	524	574
	Fire Extinguisher				372		1,100	/LS						1,472	1,621
	Fire Extinguisher Fire Extinguisher				372		1,100							1,472	1,621
	550 UV and Digester Blower Building				372		1,100	/LS						1,472	1,621
700	Administration Building														
	Fire Extinguisher Fire Extinguisher														
10-	101 Fire Extinguisher														
	Fire Extinguisher Dry 10 lbs	10520.200	2.00 ea	31.00 /mh	124	175.00 /ea	350	-	-	-	-	-	-	474	524
	Fire Extin. Cabinet Wall Mount	10520.100	2.00 ea	31.00 /mh	124	400.00 /ea	800	-	-	-	-	-	-	924	974
	Fire Extinguisher				248		1,150	/LS						1,398	1,497
	Fire Extinguisher Fire Extinguisher				248		1,150							1,398	1,497
	700 Administration Building				248		1,150	/LS						1,398	1,497
	104400 Fire Protection Specialties and Safety Equipment				1,488		4,775							6,263	6,858
105100	Lockers														
700	Administration Building														
	Lockers Lockers														
10-	101 Lockers														
	Lockers 18x24x72	10500.100	12.00 ea	31.00 /mh	2,976	600.00 /ea	7,200	-	-	-	-	-	-	10,176	11,366
	Lockers 36x24x72	10500.100	10.00 ea	31.00 /mh	2,480	800.00 /ea	8,000	-	-	-	-	-	-	10,480	11,472
	Sub - Lockers	10810.100	1.00 ls	-	-	-	-			-	-	-	-		
	Lockers				5,456		15,200	/LS						20,656	22,838
	Lockers Lockers				5,456		15,200							20,656	22,838
	700 Administration Building				5,456		15,200	/LS						20,656	22,838
	105100 Lockers				5,456		15,200							20,656	22,838
122100	Window Blinds														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	700 Administration Building														
	Window Blinds Window Blinds														
	12-01 Blinds														
	Sub - Blinds & Shades	12490.100	1.00 ls	-	-	-	-	2,500.00 /ls	2,500	-	-	-	-	2,500	2,500
	Vertical Blinds Aluminum Strip 4x4	12490.100	7.00 ea	31.00 /mh	868	0.00 /ea	0	-	-	-	-	-	-	868	1,215
	Vertical Blinds Aluminum Strip 12x4	12490.100	1.00 ea	31.00 /mh	248	0.00 /ea	0	-	-	-	-	-	-	248	347
	Blinds				1,116			/LS	2,500					3,616	4,062
	Window Blinds Window Blinds				1,116				2,500					3,616	4,062
	700 Administration Building				1,116			/LS	2,500					3,616	4,062
	122100 Window Blinds				1,116				2,500					3,616	4,062
133419	Metal Building System														
	001 General														
	PEMB Metal Building PEMB														
	13-02 Pre-Engineered Metal Building (PEMB)														
	Metal Building Subcontractor	13122.100	1.00 ls	-	-	-	-	1,761,000.00 /ls	1,761,000	-	-	-	-	1,761,000	1,761,000
	Metal Building Subcontractor bond	13122.100	1.00 ls	-	-	-	-			-	-	-	-		
	Pre-Engineered Metal Building (PEMB)							/LS	1,761,000					1,761,000	1,761,000
	PEMB Metal Building PEMB								1,761,000					1,761,000	1,761,000
	001 General							/LS	1,761,000					1,761,000	1,761,000
	350 Step Feed Process Building														
	PEMB Metal Building PEMB														
	13-02 Step Feed PEMB														
	Purchase anchors Metal Building 3/4" anchor bolt	13122.100	72.00 ea	31.00 /mh	0	40.00 /ea	2,880	-	-	-	-	/ea	-	2,880	2,880
	Metal Building Anchor Plate Assembly (4 anchor per)	13122.100	18.00 ea	31.00 /mh	4,464	0.00 /ea	0	-	-	-	-	-	-	4,464	6,250
	Grout Bearing Plates	3150.700	18.00 ea	31.00 /mh	2,232	-	-	-	-	-	-	-	-	2,232	3,125
	Manitowoc 10000 - 100 Ton (332 HP) (L)	1900.100	1.00 mnth	7,296.00 /mnth	7,296	350.00 /mnth	350	-	-	12,500.00 /mnth	12,500	2,200.00 /mnth	2,200	22,346	25,514
	Non Shrink Grout	3150.700	6.00 cf	31.00 /mh	186	60.00 /cf	360	-	-	-	-	-	-	546	620
	Step Feed PEMB				14,178		3,590	/LS			12,500		2,200	32,468	38,389
	PEMB Metal Building PEMB				14,178		3,590				12,500		2,200	32,468	38,389
	350 Step Feed Process Building				14,178		3,590	/LS			12,500		2,200	32,468	38,389
	550 UV and Digester Blower Building														
	PEMB Metal Building PEMB														
	13-02 PEMB UV and Blower														
	Metal Building Anchor Purchase 3/4"	13122.100	56.00 ea	31.00 /mh	0	40.00 /ea	2,240	-	-	-	-	/ea	-	2,240	2,240
	Metal Building Anchor Assembly set	13122.100	14.00 ea	31.00 /mh	3,472	0.00 /ea	0	-	-	-	-	-	-	3,472	4,861
	Grout Bearing Plates	3150.700	14.00 ea	31.00 /mh	1,736	-	-	-	-	-	-	-	-	1,736	2,430
	Manitowoc 10000 - 100 Ton (332 HP) (L)	1900.100	1.00 mnth	7,296.00 /mnth	7,296	350.00 /mnth	350	-	-	12,500.00 /mnth	12,500	2,200.00 /mnth	2,200	22,346	25,514
	Non Shrink Grout	3150.700	5.00 cf	31.00 /mh	155	60.00 /cf	300	-	-	-	-	-	-	455	517
	PEMB UV and Blower				12,659		2,890	/LS			12,500		2,200	30,249	35,563
	PEMB Metal Building PEMB				12,659		2,890				12,500		2,200	30,249	35,563
	550 UV and Digester Blower Building				12,659		2,890	/LS			12,500		2,200	30,249	35,563
	700 Administration Building														
	PEMB Metal Building PEMB														
	13-02 Admin PEMB														
	Metal Building Anchors 3/4"	13122.100	48.00 ea	31.00 /mh	0	40.00 /ea	1,920	-	-	-	-	/ea	-	1,920	1,920
	Metal Building Anchor Bolt Assembly set	13122.100	12.00 ea	31.00 /mh	2,976	0.00 /ea	0	-	-	-	-	-	-	2,976	4,166
	Grout Bearing Plates	3150.700	12.00 ea	31.00 /mh	1,488	-	-	-	-	-	-	-	-	1,488	2,083
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	1.00 mnth	7,296.00 /mnth	7,296	350.00 /mnth	350	-	-	9,500.00 /mnth	9,500	1,500.00 /mnth	1,500	18,646	21,754
	Non Shrink Grout	3150.700	4.00 cf	31.00 /mh	124	60.00 /cf	240	-	-	-	-	-	-	364	414
	Admin PEMB				11,884		2,510	/LS			9,500		1,500	25,394	30,338
	PEMB Metal Building PEMB				11,884		2,510				9,500		1,500	25,394	30,338
	700 Administration Building				11,884		2,510	/LS			9,500		1,500	25,394	30,338
	133419 Metal Building System				38,721		8,990		1,761,000		34,500		5,900	1,849,111	1,865,289
220000	Plumbing														
	001 General														
	Plumbing														
	15 - 2 Plumbing - Sub														
	Plumbing Subcontractor w/ Bond	15403.100	1.00 ls	-	-	-	-	633,000.00 /ls	633,000	-	-	-	-	633,000	633,000
	Plumbing - Sub							/LS	633,000					633,000	633,000

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Plumbing								633,000					633,000	633,000
	001 General							/LS	633,000					633,000	633,000
	100 Headworks														
	Plumbing														
	154-4609- 100- HW Floor Drains Trench and Encase														
	Trench Excavtion 0- 4'	2333.010	200.00 lf	31.00 /mh	1,550	-	-	-	-	-	-	-	-	1,550	2,170
	Formwork Encasement	3100.108	800.00 sf	31.00 /mh	3,720	1.50 /sf	1,260	-	-	-	-	-	-	4,980	6,468
	Place Encasement Concrete	3310.195	35.00 cy	31.00 /mh	1,161	166.00 /cy	6,217	-	-	-	-	-	-	7,378	7,842
	Encasement Rebar	3210.104	3.50 tn	31.00 /mh	3,255	1,400.00 /tn	5,145	-	-	-	-	-	-	8,400	9,702
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	1,200.00 /mnth	1,200	4,200	4,260
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	100- HW Floor Drains Trench and Encase		1.00 ea		9,686		12,622	/ea			6,000		3,200	31,508	35,502
	Plumbing				9,686		12,622				6,000		3,200	31,508	35,502
	100 Headworks				9,686		12,622	/LS			6,000		3,200	31,508	35,502
	550 UV and Digester Blower Building														
	Plumbing														
	154-4609- 550 - UV Digester Drain Encasement														
	Trench Excavtion 0- 4'	2333.010	130.00 lf	31.00 /mh	1,008	-	-	-	-	-	-	-	-	1,008	1,411
	Formwork Encasement	3100.108	520.00 sf	31.00 /mh	2,418	1.50 /sf	819	-	-	-	-	-	-	3,237	4,204
	Pipe Encasement Rebar	3200.980	2.40 tn	31.00 /mh	2,232	1,400.00 /tn	3,360	-	-	-	-	-	-	5,592	6,485
	Place Encasement Concrete	3310.195	24.00 cy	31.00 /mh	796	166.00 /cy	4,263	-	-	-	-	-	-	5,059	5,377
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	1,200.00 /mnth	1,200	4,200	4,260
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	550 - UV Digester Drain Encasement		1.00 ea		6,454		8,442	/ea			6,000		3,200	24,095	26,797
	Plumbing				6,454		8,442				6,000		3,200	24,095	26,797
	550 UV and Digester Blower Building				6,454		8,442	/LS			6,000		3,200	24,095	26,797
	700 Administration Building														
	Plumbing														
	154-4609- 700 - Admin Drain Pipe Encasement														
	Place Encasement Concrete	3310.195	38.00 cy	31.00 /mh	1,260	166.00 /cy	6,750	-	-	-	-	-	-	8,010	8,514
	Encasement Rebar	3210.104	3.80 tn	31.00 /mh	3,534	1,400.00 /tn	5,586	-	-	-	-	-	-	9,120	10,534
	Trench Excavtion 4- 6'	2333.010	230.00 lf	31.00 /mh	1,783	-	-	-	-	-	-	-	-	1,783	2,496
	Formwork Encasement	3100.108	920.00 sf	31.00 /mh	4,278	1.50 /sf	1,449	-	-	-	-	-	-	5,727	7,438
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	1,200.00 /mnth	1,200	4,200	4,260
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	700 - Admin Drain Pipe Encasement				10,855		13,785	/ea			6,000		3,200	33,840	38,302
	Plumbing				10,855		13,785				6,000		3,200	33,840	38,302
	700 Administration Building				10,855		13,785	/LS			6,000		3,200	33,840	38,302
	220000 Plumbing				26,994		34,848		633,000		18,000		9,600	722,443	733,600
230000	HVAC														
	001 General														
	HVAC														
	15 - 1 HVAC - Sub														
	HVAC Subcontractor w/ Bond	15402.010	1.00 ls	-	-	-	-	1,739,000.00 /ls	1,739,000	-	-	-	-	1,739,000	1,739,000
	Unload HAVC	1630.100	2.00 wk	1,200.00 /wk	2,400	-	-	-	-	/ea	-	-	-	2,400	3,360
	Grove RT760/RT700, 60 ton, wo/operator (240 HP) (L)	1900.100	0.25 mnth	-	-	350.00 /mnt h	88	-	-	9,500.00 /mnth	2,375	1,500.00 /mnth	375	2,838	2,885
	HVAC - Sub				2,400		88	/LS	1,739,000		2,375		375	1,744,238	1,745,245
	HVAC				2,400		88		1,739,000		2,375		375	1,744,238	1,745,245
	001 General				2,400		88	/LS	1,739,000		2,375		375	1,744,238	1,745,245
	230000 HVAC				2,400		88		1,739,000		2,375		375	1,744,238	1,745,245
260000	Electrical														
	001 General														
	Electrical														
	16 -1 Electrical - Sub														
	Electrical Sub w/ Bond	16000.001	1.00 ls	-	-	-	-	7,250,403.00 /ls	7,250,403	-	-	-	-	7,250,403	7,250,403
	Temprary Construction power	16000.001	1.00 ls	-	-	-	-	25,000.00 /ls	25,000	-	-	-	-	25,000	25,000
	Electrical minor changes (1% of electrical number)	16000.001	1.00 ls	-	-	/ls		72,500.00 /ls	72,500	-	-	-	-	72,500	72,500
	Bobcat Skid Steer (85hp)- track (L) with Auger	1900.131	1.00 mnth	-	-	-	-	-	-	4,000.00 /mnth	4,000	2,000.00 /mnth	2,000	6,000	6,080
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 mnth	-	-	-	-	-	-	5,500.00 /mnth	5,500	3,000.00 /mnth	3,000	8,500	8,610
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,250	3,500.00 /mnth	1,750	6,000	6,085
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	6.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	18,000	1,200.00 /mnth	7,200	25,200	25,560
	Unload and assist electrical gear	1000.100	4.00 wk	1,200.00 /wk	4,800	-	-	-	-	-	-	-	-	4,800	6,720
	Electrical Sub allowance wire to place Blowoff at Aeration	16000.001	1.00 ls	-	-	-	-	8,000.00 /ls	8,000	-	-	-	-	8,000	8,000
	Electrical - Sub				4,800			/LS	7,355,903		31,750		13,950	7,406,403	7,408,958

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Electrical				4,800				7,355,903		31,750		13,950	7,406,403	7,408,958
	001 General				4,800			/LS	7,355,903		31,750		13,950	7,406,403	7,408,958
	260000 Electrical				4,800				7,355,903		31,750		13,950	7,406,403	7,408,958
260533															
	053 Site Electrical														
	Ductbank														
	16-01 Site Electrical Direct Bury HH-10A(South) to Site Light														
	Duct Bank Excavation/Backfill	16000.002	100.00 lf	31.00 /mh	775	-	-	-	-	/lf	-	-	-	775	1,085
	Duct Bank Bedding	2305.500	27.00 tn	-	-	24.00 /ton	648	-	-	-	-	-	-	648	648
	Electrical Handholes	16000.002	1.00 ea	31.00 /mh	248	0.00 /ea	0	-	-	-	-	-	-	248	347
	Electrical Light Pole Base	16000.002	2.00 ea	31.00 /mh	1,984	800.00 /ea	1,600	-	-	-	-	-	-	3,584	4,378
	Formwork Sonotube 24"	3100.112	16.00 lf	31.00 /mh	99	9.00 /lf	151	-	-	-	-	-	-	250	290
	Site Electrical Direct Bury HH-10A(South) to Site Light		100.00 lf		3,106		2,399	/lf						5,505	6,748
	16-01 Site Electrical Direct Bury HH-10A(North) to Site Lights														
	Duct Bank Excavation/Backfill	16000.002	45.00 lf	31.00 /mh	349	-	-	-	-	/lf	-	-	-	349	488
	Duct Bank Bedding	2305.500	12.00 tn	-	-	24.00 /ton	288	-	-	-	-	-	-	288	288
	Electrical Handholes	16000.002	1.00 ea	31.00 /mh	248	0.00 /ea	0	-	-	-	-	-	-	248	347
	Electrical Light Pole Base	16000.002	1.00 ea	31.00 /mh	992	800.00 /ea	800	-	-	-	-	-	-	1,792	2,189
	Formwork Sonotube 24"	3100.112	8.00 lf	31.00 /mh	50	9.00 /lf	76	-	-	-	-	-	-	125	145
	Site Electrical Direct Bury HH-10A(North) to Site Lights		45.00 lf		1,638		1,164	/lf						2,802	3,457
	16-01 Site Electrical Direct Bury Admin to Site Light														
	Duct Bank Excavation/Backfill	16000.002	70.00 lf	31.00 /mh	543	-	-	-	-	/lf	-	-	-	543	760
	Duct Bank Bedding	2305.500	19.00 tn	-	-	24.00 /ton	456	-	-	-	-	-	-	456	456
	Electrical Handholes	16000.002	1.00 ea	31.00 /mh	248	0.00 /ea	0	-	-	-	-	-	-	248	347
	Electrical Light Pole Base	16000.002	1.00 ea	31.00 /mh	992	800.00 /ea	800	-	-	-	-	-	-	1,792	2,189
	Formwork Sonotube 24"	3100.112	8.00 lf	31.00 /mh	50	9.00 /lf	76	-	-	-	-	-	-	125	145
	Site Electrical Direct Bury Admin to Site Light		70.00 lf		1,832		1,332	/lf						3,164	3,897
	16-01 Site Electrical Direct Bury HH-8A to Site Light														
	Duct Bank Excavation/Backfill	16000.002	25.00 lf	31.00 /mh	194	-	-	-	-	/lf	-	-	-	194	271
	Duct Bank Bedding	2305.500	7.00 tn	-	-	24.00 /ton	168	-	-	-	-	-	-	168	168
	Electrical Handholes	16000.002	1.00 ea	31.00 /mh	248	0.00 /ea	0	-	-	-	-	-	-	248	347
	Electrical Light Pole Base	16000.002	1.00 ea	31.00 /mh	992	800.00 /ea	800	-	-	-	-	-	-	1,792	2,189
	Formwork Sonotube 24"	3100.112	8.00 lf	31.00 /mh	50	9.00 /lf	76	-	-	-	-	-	-	125	145
	Site Electrical Direct Bury HH-8A to Site Light		25.00 lf		1,483		1,044	/lf						2,527	3,120
	16-01 Site Electrical Direct Bury HH-4A to Site Lights														
	Duct Bank Excavation/Backfill	16000.002	75.00 lf	31.00 /mh	581	-	-	-	-	0.00 /lf	0	-	-	581	814
	Duct Bank Bedding	2305.500	17.00 tn	-	-	24.00 /ton	408	-	-	-	-	-	-	408	408
	Electrical Light Pole Base	16000.002	1.00 ea	31.00 /mh	992	800.00 /ea	800	-	-	-	-	-	-	1,792	2,189
	Formwork Sonotube 24"	3100.112	5.00 lf	31.00 /mh	31	9.00 /lf	47	-	-	-	-	-	-	78	91
	Site Electrical Direct Bury HH-4A to Site Lights		75.00 lf		1,604		1,255	/lf						2,860	3,501
	16-01 Site Electrical HH-6A to Site Lights														
	Duct Bank Excavation/Backfill	16000.002	565.00 lf	31.00 /mh	4,379	-	-	-	-	0.00 /lf	0	-	-	4,379	6,130
	Duct Bank Bedding	2305.500	150.00 tn	-	-	24.00 /ton	3,600	-	-	-	-	-	-	3,600	3,600
	Electrical Light Pole Base	16000.002	3.00 ea	31.00 /mh	2,976	800.00 /ea	2,400	-	-	-	-	-	-	5,376	6,566
	Formwork Sonotube 24"	3100.112	15.00 lf	31.00 /mh	93	9.00 /lf	142	-	-	-	-	-	-	235	272
	Site Electrical HH-6A to Site Lights		565.00 lf		7,448		6,142	/lf						13,590	16,569
	16-01 Site Electrical Concrete Encased Ex Digesters 1-4 to Digester RM 550														
	Duct Bank Excavation/Backfill	16000.002	525.00 lf	31.00 /mh	4,069	-	-	-	-	0.00 /lf	0	-	-	4,069	5,696
	Duct Bank Formwork	16000.002	2,120.00 sf	31.00 /mh	6,572	1.50 /sf	3,180	-	-	-	-	-	-	9,752	12,381
	Duct Bank Concrete	3310.100	117.78 cy	31.00 /mh	2,921	166.00 /cy	20,920	-	-	-	-	-	-	23,841	25,009
	Color Dye	3310.110	117.78 cy	-	-	65.00 /cy	8,191	-	-	-	-	-	-	8,191	8,191
	Duct Bank Rebar	3210.230	8.70 tn	31.00 /mh	8,091	1,400.00 /ton	12,180	-	-	-	-	-	-	20,271	23,507
	Electrical Handholes	16000.002	8.00 ea	31.00 /mh	1,984	0.00 /ea	0	-	-	-	-	-	-	1,984	2,778
	Utility Bedding Gravel-Crushed	2305.200	70.00 tn	-	-	23.00 /ton	2,576	-	-	-	-	-	-	2,576	2,576
	One Sided Wall Forms Duct Bank Corbels	3100.184	4.00 ea	31.00 /mh	992	400.00 /ea	1,680	-	-	-	-	-	-	2,672	3,069
	Drill and Epoxy #5	3210.101	10.00 ea	31.00 /mh	93	5.00 /ea	53	-	-	-	-	-	-	146	183
	Site Electrical Concrete Encased Ex Digesters 1-4 to Digester RM 550		525.00 lf		24,722		48,780	/lf						73,501	83,390
	16-01 Site Electrical Concrete Encased Dig.Rm 550 to SFP Bldg 350														
	Duct Bank Excavation/Backfill	16000.002	615.00 lf	31.00 /mh	4,766	-	-	-	-	0.00 /lf	0	-	-	4,766	6,673
	Duct Bank Formwork	16000.002	2,480.00 sf	31.00 /mh	7,688	1.50 /sf	3,720	-	-	-	-	-	-	11,408	14,483
	Duct Bank Concrete	3310.100	92.00 cy	31.00 /mh	2,282	166.00 /cy	16,341	-	-	-	-	-	-	18,623	19,535
	Color Dye	3310.110	92.00 cy	-	-	65.00 /cy	6,399	-	-	-	-	-	-	6,399	6,399

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
16-01	Site Electrical Concrete Encased Dig.Rm 550 to SFP Bldg 350														
	Duct Bank Rebar	3210.230	6.90 tn	31.00 /mh	6,417	1,400.00 /ton	9,660	-	-	-	-	-	-	16,077	18,644
	Electrical Handholes	16000.002	7.00 ea	31.00 /mh	1,736	0.00 /ea	0	-	-	-	-	-	-	1,736	2,430
	One Sided Wall Forms Duct Bank Corbels	3100.184	2.00 ea	31.00 /mh	496	400.00 /ea	840	-	-	-	-	-	-	1,336	1,534
	Utility Bedding Gravel-Crushed	2305.200	82.00 tn	-	-	23.00 /ton	3,018	-	-	-	-	-	-	3,018	3,018
	Drill and Epoxy #5	3210.101	10.00 ea	31.00 /mh	93	5.00 /ea	53	-	-	-	-	-	-	146	183
	Site Electrical Concrete Encased Dig.Rm 550 to SFP Bldg 350		615.00 lf		23,478		40,030	/lf						63,508	72,899
16-01	Site Electrical Concrete Encased HH-3 to Admin Bldg 700, HH 5A to clar														
	Duct Bank Excavation/Backfill	16000.002	370.00 lf	31.00 /mh	2,868	-	-	-	-	0.00 /lf	0	-	-	2,868	4,015
	Duct Bank Formwork	16000.002	1,720.00 sf	31.00 /mh	5,332	1.50 /sf	2,580	-	-	-	-	-	-	7,912	10,045
	Duct Bank Concrete	3310.100	66.00 cy	31.00 /mh	1,637	166.00 /cy	11,723	-	-	-	-	-	-	13,360	14,014
	Color Dye	3310.110	66.00 cy	-	-	65.00 /cy	4,590	-	-	-	-	-	-	4,590	4,590
	Duct Bank Rebar	3210.230	5.50 tn	31.00 /mh	5,115	1,400.00 /ton	7,700	-	-	-	-	-	-	12,815	14,861
	Duct Bank Bedding	2305.500	65.00 tn	-	-	24.00 /ton	1,560	-	-	-	-	-	-	1,560	1,560
	Electrical Handholes	16000.002	4.00 ea	31.00 /mh	992	/ea		-	-	-	-	-	-	992	1,389
	One Sided Wall Forms Duct Bank Corbels	3100.184	3.00 ea	31.00 /mh	744	400.00 /ea	1,260	-	-	-	-	-	-	2,004	2,302
	Drill and Epoxy #5	3210.101	10.00 ea	31.00 /mh	93	5.00 /ea	53	-	-	-	-	-	-	146	183
	Site Electrical Concrete Encased HH-3 to Admin Bldg 700, HH 5A to clar		430.00 lf		16,780		29,466	/lf						46,246	52,958
16-01	Site Electrical Concrete Encased 550-XFMR to HH-7A and DB Aeration BO														
	Duct Bank Excavation/Backfill	16000.002	55.00 lf	31.00 /mh	426	-	-	-	-	0.00 /lf	0	-	-	426	597
	Duct Bank Formwork	16000.002	220.00 sf	31.00 /mh	682	1.50 /sf	330	-	-	-	-	-	-	1,012	1,285
	Duct Bank Concrete	3310.100	10.00 cy	31.00 /mh	248	166.00 /cy	1,776	-	-	-	-	-	-	2,024	2,123
	Color Dye	3310.110	10.00 cy	-	-	65.00 /cy	696	-	-	-	-	-	-	696	696
	Duct Bank Rebar	3210.230	0.75 tn	31.00 /mh	698	1,400.00 /ton	1,050	-	-	-	-	-	-	1,748	2,027
	Duct Bank Bedding	2305.500	6.00 tn	-	-	24.00 /ton	144	-	-	-	-	-	-	144	144
	Electrical Handholes	16000.002	1.00 ea	31.00 /mh	248	/ea		-	-	-	-	-	-	248	347
	Site Electrical Concrete Encased 550-XFMR to HH-7A and DB Aeration BO		15.00 lf		2,302		3,996	/lf						6,297	7,218
16-01	Site Electrical Concrete Encased 100-XFMR to HH-1A and HH 8A to Digest														
	Duct Bank Excavation/Backfill	16000.002	110.00 lf	31.00 /mh	853	-	-	-	-	0.00 /lf	0	-	-	853	1,194
	Duct Bank Formwork	16000.002	440.00 sf	31.00 /mh	1,364	1.50 /sf	660	-	-	-	-	-	-	2,024	2,570
	Duct Bank Concrete	3310.100	25.00 cy	31.00 /mh	620	166.00 /cy	4,441	-	-	-	-	-	-	5,061	5,309
	Color Dye	3310.110	25.00 cy	-	-	65.00 /cy	1,739	-	-	-	-	-	-	1,739	1,739
	Duct Bank Rebar	3210.230	1.88 tn	31.00 /mh	1,748	1,400.00 /ton	2,632	-	-	-	-	-	-	4,380	5,080
	Duct Bank Bedding	2305.500	15.00 tn	0.00	0	24.00 /ton	360	-	-	-	-	-	-	360	360
	Slab Void - 6"	3100.320	40.00 sf	31.00 /mh	124	10.00 /sf	440	-	-	-	-	-	-	564	614
	Site Electrical Concrete Encased 100-XFMR to HH-1A and HH 8A to Digest		110.00 lf		4,709		10,271	/lf						14,980	16,864
16-01	Site Electrical Concrete Encased 350 XFMER to 350-Gen to SFP														
	Duct Bank Excavation/Backfill	16000.002	50.00 lf	31.00 /mh	388	-	-	-	-	0.00 /lf	0	-	-	388	543
	Duct Bank Formwork	16000.002	200.00 sf	31.00 /mh	620	1.50 /sf	300	-	-	-	-	-	-	920	1,168
	Duct Bank Concrete	3310.100	12.00 cy	31.00 /mh	298	166.00 /cy	2,131	-	-	-	-	-	-	2,429	2,548
	Color Dye	3310.110	12.00 cy	-	-	65.00 /cy	835	-	-	-	-	-	-	835	835
	Duct Bank Rebar	3210.230	0.90 tn	31.00 /mh	837	1,400.00 /ton	1,260	-	-	-	-	-	-	2,097	2,432
	Duct Bank Bedding	2305.500	11.00 tn	-	-	24.00 /ton	264	-	-	-	-	-	-	264	264
	Electrical Handholes	16000.002	1.00 ea	31.00 /mh	248	/ea		-	-	-	-	-	-	248	347
	One Sided Wall Forms Duct Bank Corbels	3100.184	1.00 ea	31.00 /mh	248	400.00 /ea	420	-	-	-	-	-	-	668	767
	Site Electrical Concrete Encased 350 XFMER to 350-Gen to SFP		50.00 lf		2,638		5,210	/lf						7,848	8,903
16-01	Site Electrical Concrete Encased 550-GEN to Blower Bldg & Adend #3 DB														
	Duct Bank Excavation/Backfill	16000.002	80.00 lf	31.00 /mh	620	-	-	-	-	0.00 /lf	0	-	-	620	868
	Duct Bank Formwork	16000.002	400.00 sf	31.00 /mh	1,240	1.50 /sf	600	-	-	-	-	-	-	1,840	2,336
	Duct Bank Concrete	3310.100	17.00 cy	31.00 /mh	422	166.00 /cy	3,020	-	-	-	-	-	-	3,441	3,610
	Color Dye	3310.110	17.00 cy	-	-	65.00 /cy	1,182	-	-	-	-	-	-	1,182	1,182
	Duct Bank Rebar	3210.230	1.28 tn	31.00 /mh	1,186	1,400.00 /ton	1,785	-	-	-	-	-	-	2,971	3,445
	Duct Bank Bedding	2305.500	21.00 tn	-	-	24.00 /ton	504	-	-	-	-	-	-	504	504
	One Sided Wall Forms Duct Bank Corbels	3100.184	1.00 ea	31.00 /mh	248	400.00 /ea	420	-	-	-	-	-	-	668	767
	Site Electrical Concrete Encased 550-GEN to Blower Bldg & Adend #3 DB		80.00 lf		3,715		7,511	/lf						11,226	12,712
16-01	Site Electrical Direct Bury 700 Admin to Ex Admin														
	Duct Bank Excavation/Backfill	16000.002	390.00 lf	31.00 /mh	3,023	-	-	-	-	0.00 /lf	0	-	-	3,023	4,232
	Duct Bank Bedding	2305.500	144.00 tn	-	-	24.00 /ton	3,456	-	-	-	-	-	-	3,456	3,456
	Electrical Handholes	16000.002	2.00 ea	31.00 /mh	496	0.00 /ea	0	-	-	-	-	-	-	496	694

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Site Electrical Direct Bury 700 Admin to Ex Admin		390.00 lf		3,519		3,456	/lf						6,975	8,382
16-01	Site Electrical Direct Bury HH-7B to Ex RAS/WAS														
	Duct Bank Excavation/Backfill	16000.002	115.00 lf	31.00 /mh	891	-	-	-	-	0.00 /lf	0	-	-	891	1,248
	Duct Bank Bedding	2305.500	31.00 tn	-	-	24.00 /ton	744	-	-	-	-	-	-	744	744
	Site Electrical Direct Bury HH-7B to Ex RAS/WAS		115.00 lf		891		744	/lf						1,635	1,992
16-01	Site Electrical Direct Bury Building Grounding														
	Duct Bank Excavation/Backfill	16000.002	1,500.00 lf	31.00 /mh	9,300	-	-	-	-	0.00 /lf	0	-	-	9,300	13,020
	Site Electrical Direct Bury Building Grounding		1,500.00 lf		9,300			/lf						9,300	13,020
16-01	Duct Banks Under Buildings Headworks UV step Feed and admin														
	Duct Bank Excavation/Backfill	16000.002	220.00 lf	31.00 /mh	1,364	-	-	-	-	0.00 /lf	0	-	-	1,364	1,910
	Duct Bank Formwork	16000.002	880.00 sf	31.00 /mh	1,500	1.50 /sf	1,320	-	-	-	-	-	-	2,820	3,421
	Duct Bank Concrete	3310.100	49.00 cy	31.00 /mh	638	166.00 /cy	8,703	-	-	-	-	-	-	9,341	9,597
	Duct Bank Rebar	3210.230	3.70 tn	31.00 /mh	3,441	1,400.00 /ton	5,180	-	-	-	-	-	-	8,621	9,997
	Color Dye	3310.110	49.00 cy	-	-	65.00 /cy	3,408	-	-	-	-	-	-	3,408	3,408
	Duct Banks Under Buildings Headworks UV step Feed and admin		180.00 lf		6,943		18,611	/lf						25,555	28,332
	Ductbank				116,109		181,409							297,518	343,962
	053 Site Electrical				116,109		181,409	/LS						297,518	343,962
	260533				116,109		181,409							297,518	343,962
312316	Excavation														
001	General														
	Dirtwork Dirtwork														
	01 -100 Dirtwork General														
	Operator Foreman	1000.100	8.00 wk	1,500.00 /wk	12,000	-	-	-	-	-	-	-	-	12,000	16,800
	Pickup	1900.210	4.00 mnth	-	-	-	-	-	-	836.00 /mnth	3,344	514.00 /mnth	2,056	5,400	5,467
	(3rd Party) Semi Tractor	1900.210	96.00 hr	-	-	-	-	125.00 /hr	12,000	-	-	-	-	12,000	12,000
	Dirtwork General				12,000			/wk	12,000		3,344		2,056	29,400	34,267
	014- Dirtwork Winter Conditions														
	Winter Conditions	1572.100	8.00 mnth	31.00 /mh	5,704	1,500.00 /mnt h	12,000	-	-	-	-	-	-	17,704	19,986
	Ground Heater E2200 (In @ 1.1 gal/hr *3 24/7) (L)	1900.400	8.00 mnth	-	-	-	-	-	-	6,000.00 /mnth	48,000	3,800.00 /mnth	30,400	78,400	79,360
	Dirtwork Winter Conditions				5,704		12,000	/mo			48,000		30,400	96,104	99,346
	0213- Site Erosion Control														
	Inlet Protection Waddel	2370.150	200.00 lf	31.00 /mh	620	2.00 /lf	440	-	-	-	-	-	-	1,060	1,308
	Silt Fence	2370.150	3,000.00 lf	31.00 /mh	9,300	1.00 /lf	3,300	-	-	-	-	-	-	12,600	16,320
	Stone @ Entrance	2305.350	39.70 cy	31.00 /mh	738	43.00 /ton	2,817	-	-	-	-	-	-	3,555	3,851
	Concrete Washout (Inst'l, Maintain, Remove)	2305.350	1.00 ea	31.00 /mh	1,736	1,000.00 /ea	1,000	-	-	-	-	-	-	2,736	3,430
	(3rd Party) Dump Truck, 10 wheel haul off concrete spoils	1900.210	60.00 hr	-	-	-	-	110.00 /hr	6,600	-	-	-	-	6,600	6,600
	Erosion Control (BMP) Maintenance and dust control	2370.050	768.00 mnhr	31.00 /mh	23,808	-	-	-	-	-	-	-	-	23,808	33,331
	Erosion Control Mats	2322.040	1,200.00 sy	31.00 /mh	2,046	-	-	5.00 /sy	6,000	-	-	-	-	8,046	8,864
	Clean Rock parking and staging area	2305.050	50.00 cy	-	-	34.00 /ton	2,754	-	-	-	-	-	-	2,754	2,754
	Hydroseeding (including mob)	2322.060	13.00 ac	-	-	-	-	2,500.00 /ac	32,500	-	-	-	-	32,500	32,500
	Backflow Preventer Flg 3" for water truck	15403.130	1.00 ea	31.00 /mh	-	4,500.00 /ea	4,500	-	-	-	-	-	-	4,500	4,500
	Sub - Fencing replace existing fence and add 1ea double gate	2820.980	1.00 ls	-	-	-	-	18,000.00 /ls	18,000	-	-	-	-	18,000	18,000
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,375	3,000.00 /mnth	750	2,125	2,153
	Water Maintenance for Landscaping	2322.060	1.00 ls	31.00 /mh	3,720	20,000.00 /ls	20,000	-	-	-	-	-	-	23,720	25,208
	Bobcat Skid Steer with trencher, broom or plow	1900.131	8.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	24,000	2,000.00 /mnth	16,000	40,000	40,480
	Site Erosion Control		1.00 ls		41,968		34,811	63,100.00 /ls	63,100		25,375		16,750	182,004	199,299
	0238-1 Site Dewatering Clarifiers, IPS, Digesters Aetation and Orbal														
	Trench Excavtion 0- 4'	2333.010	1,300.00 lf	31.00 /mh	4,836	-	-	-	-	-	-	-	-	4,836	6,770
	Trench Backfill 0- 4'	2333.020	1,300.00 lf	31.00 /mh	6,448	-	-	-	-	-	-	-	-	6,448	9,027
	Utility Bedding Stone 3/4"	2305.200	577.78 cy	-	-	34.00 /ton	31,431	-	-	-	-	-	-	31,431	31,431
	Spoils to Waste	2333.060	577.78 cy	31.00 /mh	1,791	-	-	-	-	-	-	-	-	1,791	2,508
	Trench Wrap	2333.040	2,020.00 sy	31.00 /mh	2,505	1.50 /sy	3,333	-	-	-	-	-	-	5,838	6,840
	HDPE Coiled Pipe Perfed 4	2631.201	1,300.00 lf	31.00 /mh	3,224	6.00 /lf	8,190	-	-	-	-	-	-	11,414	12,704
	HDPE Coil Tee 4	2631.214	8.00 ea	31.00 /mh	496	15.00 /ea	120	-	-	-	-	-	-	616	814
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.00 mnth	-	-	-	-	-	-	8,500.00 /mnth	8,500	3,500.00 /mnth	3,500	12,000	12,170
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 mnth	-	-	-	-	-	-	5,500.00 /mnth	5,500	3,000.00 /mnth	3,000	8,500	8,610
	Water Truck, 4,000 Gallon (L)	1900.210	1.00 mnth	-	-	-	-	-	-	4,500.00 /mnth	4,500	1,200.00 /mnth	1,200	5,700	5,790
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.00 mnth	-	-	-	-	-	-	2,000.00 /mnth	2,000	300.00 /mnth	300	2,300	2,340
	3" Pump & Hoses	2240.120	400.00 day	31.00 /mh	-	100.00 /day	40,000	-	-	/day	-	-	-	40,000	40,000
	Clean Rock for wells and sumps	2305.050	100.00 cy	-	-	34.00 /ton	5,508	-	-	-	-	-	-	5,508	5,508
	Dewatering Set Up	2240.050	1.00 ls	31.00 /mh	3,720	-	-	-	-	-	-	-	-	3,720	5,208

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0238-1 Site Dewatering Clarifiers, IPS, Digesters Aetation and Orbal														
	Dewatering Maintenance	2240.050	70.00 wk	31.00 /mh	8,680	-	-	-	-	-	-	-	-	8,680	12,152
	Dewatering Permit	2240.050	1.00 ls	-	-	-	-	-	-	-	-	3,500.00 /ls	3,500	3,500	3,500
	Dewatering Discharge Testing	2240.050	70.00 ea	31.00 /mh	4,340	-	-	-	-	-	-	60.00 /ea	4,200	8,540	10,276
	Dewatering Power hook up	2240.050	1.00 ls	31.00 /mh		/ls		25,000.00 /ls	25,000	-	-	-	-	25,000	25,000
	HD PE Pipe 8 DR 17	2631.301	1,100.00 lf	31.00 /mh	4,092	0.00 /lf	0	-	-	-	-	-	-	4,092	5,729
	HD PE 90 bend 8 DR 17	2631.314	1.00 ea	31.00 /mh	28	0.00 /ea	0	-	-	-	-	-	-	28	39
	HD PE 45 bend 8 DR 17	2631.314	3.00 ea	31.00 /mh	74	0.00 /ea	0	-	-	-	-	-	-	74	104
	HD PE Tee 8 DR 17	2631.320	4.00 ea	31.00 /mh	112	0.00 /ea	0	-	-	-	-	-	-	112	156
	Valve Butterfly Lugged 125# 3in	15110.026	19.00 ea	31.00 /mh	295	250.00 /ea	4,750	-	-	-	-	-	-	5,045	5,162
	Dewatering Subcontractor	2240.050	1.00 ls	-	-	-	-	181,650.00 /ls	181,650	-	-	-	-	181,650	181,650
	Valve Check Flange 125# 3in	15110.040	19.00 ea	31.00 /mh	295	350.00 /ea	6,650	-	-	-	-	-	-	6,945	7,062
	PVC Sch-80 Pipe 3 Bell End	2336.110	1,000.00 lf	31.00 /mh	4,960	8.00 /lf	8,000	-	-	-	-	-	-	12,960	14,944
	Excavate Sump 5' Deep	2240.200	8.00 ea	31.00 /mh	2,976	250.00 /ea	2,000	-	-	-	-	-	-	4,976	6,166
	Generators 100 kw, Kohler (140 HP) (L)	1900.020	16.00 mnth	-	-	-	-	-	-	1,520.00 /mnth	24,320	500.00 /mnth	8,000	32,320	32,806
	Site Dewatering Clarifiers, IPS, Digesters Aetation and Orbal		1.00 ls		48,871		109,982	206,650.00 /ls	206,650		44,820		23,700	434,023	454,468
	Dirtwork Dirtwork				108,543		156,793		281,750		121,539		72,906	741,531	787,380
	001 General				108,543		156,793	/LS	281,750		121,539		72,906	741,531	787,380
	051 Site Civil														
	Dirtwork Dirtwork														
	0212- Clear and grub site														
	Clear and Grub Site -Light	2314.100	2.76 ac	31.00 /mh	1,196	-	-	-	-	/ac	-	-	-	1,196	1,674
	Strip Topsoil to Stockpile	2314.200	1,500.00 cy	31.00 /mh	2,325	-	-	-	-	-	-	-	-	2,325	3,255
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.17 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,020	3,500.00 /mnth	595	1,615	1,635
	John Deere 644 Loader (232 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,020	3,700.00 /mnth	629	1,649	1,669
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Clear and grub site		2.76 ac		3,521			/ac			5,185		2,533	11,239	12,751
	0234- Excavation Sand Filter and Det Pond														
	Excavation - Mass	2317.105	1,482.00 cy	31.00 /mh	3,675	-	-	-	-	-	-	-	-	3,675	5,145
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.21 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,785	3,500.00 /mnth	735	2,520	2,556
	John Deere 644 Loader (232 HP) (M)	1900.132	0.21 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,260	3,700.00 /mnth	777	2,037	2,062
	John Deere 624 Loader (172 HP) (M)	1900.132	0.21 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,155	3,000.00 /mnth	630	1,785	1,808
	Water Truck, 4,000 Gallon (L)	1900.210	0.21 mnth	-	-	-	-	-	-	4,500.00 /mnth	945	1,200.00 /mnth	252	1,197	1,216
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.21 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,260	3,500.00 /mnth	735	1,995	2,020
	Precompact Subgrade Below Foundations	2300.600	600.00 sy	31.00 /mh	229	-	-	-	-	-	-	-	-	229	320
	Machine Grade Below Structure	2301.100	600.00 sy	31.00 /mh	465	-	-	-	-	-	-	-	-	465	651
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.11 mnth	-	-	-	-	-	-	8,500.00 /mnth	969	3,500.00 /mnth	399	1,368	1,387
	Water Truck, 4,000 Gallon (L)	1900.210	0.11 mnth	-	-	-	-	-	-	4,500.00 /mnth	513	1,200.00 /mnth	137	650	660
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.11 mnth	-	-	-	-	-	-	2,000.00 /mnth	228	300.00 /mnth	34	262	267
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.11 mnth	-	-	-	-	-	-	3,360.00 /mnth	383	1,650.00 /mnth	188	571	579
	Excavation Sand Filter and Det Pond		1,482.00 cy		4,369			/cy			8,498		3,887	16,754	18,672
	0234- Site Excavation														
	Excavation - Mass	2317.105	664.00 cy	31.00 /mh	2,058	-	-	-	-	-	-	-	-	2,058	2,882
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.09 mnth	-	-	-	-	-	-	8,500.00 /mnth	799	3,500.00 /mnth	329	1,128	1,144
	John Deere 644 Loader (232 HP) (M)	1900.132	0.09 mnth	-	-	-	-	-	-	6,000.00 /mnth	564	3,700.00 /mnth	348	912	923
	Water Truck, 4,000 Gallon (L)	1900.210	0.09 mnth	-	-	-	-	-	-	4,500.00 /mnth	423	1,200.00 /mnth	113	536	544
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.09 mnth	-	-	-	-	-	-	6,000.00 /mnth	564	3,500.00 /mnth	329	893	904
	Site Excavation		664.00 cy		2,058			/cy			2,350		1,119	5,527	6,397
	Dirtwork Dirtwork				9,948						16,033		7,539	33,520	37,820
	051 Site Civil				9,948			/LS			16,033		7,539	33,520	37,820
	100 Headworks														
	Dirtwork Dirtwork														
	0234- Headworks Excavation														
	Excavation - Mass	2317.105	2,155.00 cy	31.00 /mh	3,340	-	-	-	-	-	-	-	-	3,340	4,676
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 644 Loader (232 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,020	3,700.00 /mnth	629	1,649	1,669
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Precompact Subgrade Below Foundations	2300.600	544.00 sy	31.00 /mh	207	-	-	-	-	-	-	-	-	207	290
	Machine Grade Below Structure	2301.100	544.00 sy	31.00 /mh	422	-	-	-	-	-	-	-	-	422	590
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 mnth	-	-	-	-	-	-	8,500.00 /mnth	442	3,500.00 /mnth	182	624	633
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 mnth	-	-	-	-	-	-	4,500.00 /mnth	234	1,200.00 /mnth	62	296	301
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 mnth	-	-	-	-	-	-	2,000.00 /mnth	104	300.00 /mnth	16	120	122
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.05 mnth	-	-	-	-	-	-	3,360.00 /mnth	175	1,650.00 /mnth	86	261	264
	Headworks Excavation		2,155.00 cy		3,969			/cy			5,120		2,284	11,373	13,063
	Dirtwork Dirtwork				3,969						5,120		2,284	11,373	13,063
	100 Headworks				3,969			/LS			5,120		2,284	11,373	13,063
	150 Influent Pump Station														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Dirtwork Dirtwork														
	0234- Excavation Influent Pump Station														
	Excavation - Mass	2317.105	10,440.00 cy	31.00 /mh	17,800	-	-	-	-	-	-	-	-	17,800	24,920
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.80 mnth	-	-	-	-	-	-	8,500.00 /mnth	6,800	3,500.00 /mnth	2,800	9,600	9,736
	John Deere 644 Loader (232 HP) (M)	1900.132	0.80 mnth	-	-	-	-	-	-	6,000.00 /mnth	4,800	3,700.00 /mnth	2,960	7,760	7,856
	Water Truck, 4,000 Gallon (L)	1900.210	0.80 mnth	-	-	-	-	-	-	4,500.00 /mnth	3,600	1,200.00 /mnth	960	4,560	4,632
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.80 mnth	-	-	-	-	-	-	11,200.00 /mnth	8,960	4,500.00 /mnth	3,600	12,560	12,739
	Precompact Subgrade Below Foundations	2300.600	100.00 sy	31.00 /mh	38	-	-	-	-	-	-	-	-	38	53
	Machine Grade Below Structure	2301.100	100.00 sy	31.00 /mh	78	-	-	-	-	-	-	-	-	78	109
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 mnth	-	-	-	-	-	-	8,500.00 /mnth	238	3,500.00 /mnth	98	336	341
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 mnth	-	-	-	-	-	-	4,500.00 /mnth	126	1,200.00 /mnth	34	160	162
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 mnth	-	-	-	-	-	-	2,000.00 /mnth	56	300.00 /mnth	8	64	66
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.03 mnth	-	-	-	-	-	-	3,360.00 /mnth	94	1,650.00 /mnth	46	140	142
	Engineered/Stamped Design for Excavation	2317.105	1.00 ls	31.00 /mh	-	-	-	7,500.00 /ls	7,500	-	-	-	-	7,500	7,500
	Reroute gas line at Pump Station Excavation	15402.010	1.00 ls	-	-	-	-	7,500.00 /ls	7,500	-	-	-	-	7,500	7,500
	Reroute electrical lines at Influent Pump Station Excavation	15402.010	1.00 ls	-	-	-	-	10,000.00 /ls	10,000	-	-	-	-	10,000	10,000
	Reroute PW Line	15402.010	1.00 ls	-	-	-	-	10,000.00 /ls	10,000	-	-	-	-	10,000	10,000
	Excavation Influent Pump Station		10,440.00 cy		17,916			3.35 /cy	35,000		24,674		10,506	88,096	95,756
	Dirtwork Dirtwork				17,916				35,000		24,674		10,506	88,096	95,756
	150 Influent Pump Station				17,916			/LS	35,000		24,674		10,506	88,096	95,756
	200 Aeration Basin														
	Dirtwork Dirtwork														
	0234- Excavate Aeration Basin														
	Excavation - Mass	2317.105	9,511.00 cy	31.00 /mh	13,268	-	-	-	-	-	-	-	-	13,268	18,575
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.65 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,525	3,500.00 /mnth	2,275	7,800	7,911
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.65 mnth	-	-	-	-	-	-	11,200.00 /mnth	7,280	4,500.00 /mnth	2,925	10,205	10,351
	John Deere 644 Loader (232 HP) (M)	1900.132	0.65 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,900	3,700.00 /mnth	2,405	6,305	6,383
	Water Truck, 4,000 Gallon (L)	1900.210	0.65 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,925	1,200.00 /mnth	780	3,705	3,764
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.65 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,900	3,500.00 /mnth	2,275	6,175	6,253
	Precompact Subgrade Below Foundations	2300.600	1,555.00 sy	31.00 /mh	593	-	-	-	-	-	-	-	-	593	830
	Machine Grade Below Structure	2301.100	1,555.00 sy	31.00 /mh	1,205	-	-	-	-	-	-	-	-	1,205	1,687
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.11 mnth	-	-	-	-	-	-	8,500.00 /mnth	935	3,500.00 /mnth	385	1,320	1,339
	Water Truck, 4,000 Gallon (L)	1900.210	0.11 mnth	-	-	-	-	-	-	4,500.00 /mnth	495	1,200.00 /mnth	132	627	637
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.11 mnth	-	-	-	-	-	-	2,000.00 /mnth	220	300.00 /mnth	33	253	257
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.11 mnth	-	-	-	-	-	-	3,360.00 /mnth	370	1,650.00 /mnth	182	551	558
	Excavate Aeration Basin		9,511.00 cy		15,066			/cy			25,550		11,392	52,007	58,544
	Dirtwork Dirtwork				15,066				25,550		25,550		11,392	52,007	58,544
	200 Aeration Basin				15,066			/LS	25,550		25,550		11,392	52,007	58,544
	300 Secondary Clarifiers 5 and 6														
	Dirtwork Dirtwork														
	0234- Excavation Clarifiers 5 and 6														
	Excavation - Mass	2317.105	6,421.00 cy	31.00 /mh	13,934	-	-	-	-	-	-	-	-	13,934	19,507
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.65 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,525	3,500.00 /mnth	2,275	7,800	7,911
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.65 mnth	-	-	-	-	-	-	11,200.00 /mnth	7,280	4,500.00 /mnth	2,925	10,205	10,351
	John Deere 644 Loader (232 HP) (M)	1900.132	0.65 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,900	3,700.00 /mnth	2,405	6,305	6,383
	Water Truck, 4,000 Gallon (L)	1900.210	0.65 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,925	1,200.00 /mnth	780	3,705	3,764
	Precompact Subgrade Below Foundations	2300.600	833.00 sy	31.00 /mh	318	-	-	-	-	-	-	-	-	318	445
	Machine Grade Below Structure	2301.100	833.00 sy	31.00 /mh	646	-	-	-	-	-	-	-	-	646	904
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 mnth	-	-	-	-	-	-	8,500.00 /mnth	672	3,500.00 /mnth	277	948	961
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 mnth	-	-	-	-	-	-	4,500.00 /mnth	356	1,200.00 /mnth	95	450	457
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 mnth	-	-	-	-	-	-	2,000.00 /mnth	158	300.00 /mnth	24	182	185
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.08 mnth	-	-	-	-	-	-	3,360.00 /mnth	265	1,650.00 /mnth	130	396	401
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.65 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,900	3,500.00 /mnth	2,275	6,175	6,253
	Excavation Clarifiers 5 and 6		6,421.00 cy		14,897			/cy			24,980		11,185	51,063	57,521
	Dirtwork Dirtwork				14,897				24,980		24,980		11,185	51,063	57,521
	300 Secondary Clarifiers 5 and 6				14,897			/LS	24,980		24,980		11,185	51,063	57,521
	350 Step Feed Process Building														
	Dirtwork Dirtwork														
	0234- Excavation Step Feed Building														
	Excavation - Mass	2317.105	6,638.00 cy	31.00 /mh	13,376	-	-	-	-	-	-	-	-	13,376	18,726
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.65 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,525	3,500.00 /mnth	2,275	7,800	7,911
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.65 mnth	-	-	-	-	-	-	11,200.00 /mnth	7,280	4,500.00 /mnth	2,925	10,205	10,351
	John Deere 644 Loader (232 HP) (M)	1900.132	0.65 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,900	3,700.00 /mnth	2,405	6,305	6,383
	Water Truck, 4,000 Gallon (L)	1900.210	0.65 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,925	1,200.00 /mnth	780	3,705	3,764
	Precompact Subgrade Below Foundations	2300.600	866.00 sy	31.00 /mh	330	-	-	-	-	-	-	-	-	330	462
	Machine Grade Below Structure	2301.100	866.00 sy	31.00 /mh	671	-	-	-	-	-	-	-	-	671	940
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 mnth	-	-	-	-	-	-	8,500.00 /mnth	697	3,500.00 /mnth	287	984	998
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 mnth	-	-	-	-	-	-	4,500.00 /mnth	369	1,200.00 /mnth	98	467	475
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 mnth	-	-	-	-	-	-	2,000.00 /mnth	164	300.00 /mnth	25	189	192
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.08 mnth	-	-	-	-	-	-	3,360.00 /mnth	276	1,650.00 /mnth	135	411	416

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0234- Excavation Step Feed Building														
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.08 mnth	-	-	-	-	-	-	6,000.00 /mnth	480	3,500.00 /mnth	280	760	770
	Excavation Step Feed Building		6,638.00 cy		14,377			/cy			21,616		9,210	45,203	51,386
	Dirtwork Dirtwork				14,377						21,616		9,210	45,203	51,386
	350 Step Feed Process Building				14,377			/LS			21,616		9,210	45,203	51,386
	400 Orbal Anaerobic Reactor														
	Dirtwork Dirtwork														
	0234- Excavation Orbal Basin														
	Excavation - Mass	2317.105	1,962.00 cy	31.00 /mh	3,649	-	-	-	-	-	-	-	-	3,649	5,109
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.19 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,581	3,500.00 /mnth	651	2,232	2,264
	John Deere 644 Loader (232 HP) (M)	1900.132	0.19 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,116	3,700.00 /mnth	688	1,804	1,827
	John Deere 624 Loader (172 HP) (M)	1900.132	0.19 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,023	3,000.00 /mnth	558	1,581	1,601
	Water Truck, 4,000 Gallon (L)	1900.210	0.19 mnth	-	-	-	-	-	-	4,500.00 /mnth	837	1,200.00 /mnth	223	1,060	1,077
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.19 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,116	3,500.00 /mnth	651	1,767	1,789
	Precompact Subgrade Below Foundations	2300.600	177.00 sy	31.00 /mh	67	-	-	-	-	-	-	-	-	67	94
	Machine Grade Below Structure	2301.100	177.00 sy	31.00 /mh	137	-	-	-	-	-	-	-	-	137	192
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 mnth	-	-	-	-	-	-	8,500.00 /mnth	289	3,500.00 /mnth	119	408	414
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 mnth	-	-	-	-	-	-	4,500.00 /mnth	153	1,200.00 /mnth	41	194	197
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 mnth	-	-	-	-	-	-	2,000.00 /mnth	68	300.00 /mnth	10	78	80
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.03 mnth	-	-	-	-	-	-	3,360.00 /mnth	114	1,650.00 /mnth	56	170	173
	Excavation Orbal Basin		1,962.00 cy		3,854			/cy			6,297		2,998	13,149	14,816
	Dirtwork Dirtwork				3,854						6,297		2,998	13,149	14,816
	400 Orbal Anaerobic Reactor				3,854			/LS			6,297		2,998	13,149	14,816
	550 UV and Digester Blower Building														
	Dirtwork Dirtwork														
	0234- Excavation UV and Digester Blower Building														
	Excavation - Mass	2317.105	1,969.00 cy	31.00 /mh	4,883	-	-	-	-	-	-	-	-	4,883	6,836
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,210	3,500.00 /mnth	910	3,120	3,164
	John Deere 644 Loader (232 HP) (M)	1900.132	0.26 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,560	3,700.00 /mnth	962	2,522	2,553
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,430	3,000.00 /mnth	780	2,210	2,239
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,170	1,200.00 /mnth	312	1,482	1,505
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.26 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,560	3,500.00 /mnth	910	2,470	2,501
	Precompact Subgrade Below Foundations	2300.600	766.00 sy	31.00 /mh	292	-	-	-	-	-	-	-	-	292	409
	Machine Grade Below Structure	2301.100	766.00 sy	31.00 /mh	594	-	-	-	-	-	-	-	-	594	831
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.09 mnth	-	-	-	-	-	-	8,500.00 /mnth	740	3,500.00 /mnth	305	1,044	1,059
	Water Truck, 4,000 Gallon (L)	1900.210	0.09 mnth	-	-	-	-	-	-	4,500.00 /mnth	392	1,200.00 /mnth	104	496	504
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.09 mnth	-	-	-	-	-	-	2,000.00 /mnth	174	300.00 /mnth	26	200	204
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.09 mnth	-	-	-	-	-	-	3,360.00 /mnth	292	1,650.00 /mnth	144	436	442
	Relocate Electrical Duct Banks at excavation	15402.010	1.00 ls	-	-	-	-	50,000.00 /ls	50,000	-	-	-	-	50,000	50,000
	Excavation UV and Digester Blower Building		1,969.00 cy		5,769			25.39 /cy	50,000		9,527		4,453	69,749	72,247
	Dirtwork Dirtwork				5,769				50,000		9,527		4,453	69,749	72,247
	550 UV and Digester Blower Building				5,769			/LS	50,000		9,527		4,453	69,749	72,247
	600 Aerobic Digester 5 and 6														
	Dirtwork Dirtwork														
	0234- Excavation Digester 5 and 6														
	Excavation - Mass	2317.105	4,219.00 cy	31.00 /mh	10,463	-	-	-	-	-	-	-	-	10,463	14,648
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.48 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,080	3,500.00 /mnth	1,680	5,760	5,842
	John Deere 644 Loader (232 HP) (M)	1900.132	0.48 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,880	3,700.00 /mnth	1,776	4,656	4,714
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.48 mnth	-	-	-	-	-	-	11,200.00 /mnth	5,376	4,500.00 /mnth	2,160	7,536	7,644
	Water Truck, 4,000 Gallon (L)	1900.210	0.48 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,160	1,200.00 /mnth	576	2,736	2,779
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.48 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,880	3,500.00 /mnth	1,680	4,560	4,618
	Precompact Subgrade Below Foundations	2300.600	444.00 sy	31.00 /mh	169	-	-	-	-	-	-	-	-	169	237
	Machine Grade Below Structure	2301.100	444.00 sy	31.00 /mh	344	-	-	-	-	-	-	-	-	344	482
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 mnth	-	-	-	-	-	-	8,500.00 /mnth	425	3,500.00 /mnth	175	600	609
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 mnth	-	-	-	-	-	-	4,500.00 /mnth	225	1,200.00 /mnth	60	285	290
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 mnth	-	-	-	-	-	-	2,000.00 /mnth	100	300.00 /mnth	15	115	117
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.05 mnth	-	-	-	-	-	-	3,360.00 /mnth	168	1,650.00 /mnth	83	251	254
	Relocate 8" WAS, 4" WAS. and 4" water 3 ea at digester excavation (360 lf)	15402.010	1.00 ls	-	-	-	-	36,000.00 /ls	36,000	-	-	-	-	36,000	36,000
	Relocate 10" ALP at digeter excavation (120 lf)	15402.010	1.00 ls	-	-	-	-	18,000.00 /ls	18,000	-	-	-	-	18,000	18,000
	Relocate electrical around Digester 5 and 6	15402.010	1.00 ls	-	-	-	-	5,000.00 /ls	5,000	-	-	-	-	5,000	5,000
	Excavation Digester 5 and 6		4,219.00 cy		10,977			13.98 /cy	59,000		18,294		8,205	96,475	101,232
	Dirtwork Dirtwork				10,977				59,000		18,294		8,205	96,475	101,232
	600 Aerobic Digester 5 and 6				10,977			/LS	59,000		18,294		8,205	96,475	101,232
	700 Administration Building														
	Dirtwork Dirtwork														
	0234- Excavation Admin														
	Excavation - Mass	2317.105	350.00 cy	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 mnth	-	-	-	-	-	-	8,500.00 /mnth	680	3,500.00 /mnth	280	960	974
	John Deere 644 Loader (232 HP) (M)	1900.132	0.08 mnth	-	-	-	-	-	-	6,000.00 /mnth	480	3,700.00 /mnth	296	776	786

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0234-	Excavation Admin														
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 mnth	-	-	-	-	-	-	4,500.00 /mnth	360	1,200.00 /mnth	96	456	463
	Precompact Subgrade Below Foundations	2300.600	600.00 sy	31.00 /mh	229	-	-	-	-	-	-	-	-	229	320
	Machine Grade Below Structure	2301.100	600.00 sy	31.00 /mh	465	-	-	-	-	-	-	-	-	465	651
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.07 mnth	-	-	-	-	-	-	8,500.00 /mnth	578	3,500.00 /mnth	238	816	828
	Water Truck, 4,000 Gallon (L)	1900.210	0.07 mnth	-	-	-	-	-	-	4,500.00 /mnth	306	1,200.00 /mnth	82	388	394
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.07 mnth	-	-	-	-	-	-	2,000.00 /mnth	136	300.00 /mnth	20	156	159
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.07 mnth	-	-	-	-	-	-	3,360.00 /mnth	228	1,650.00 /mnth	112	341	345
	Excavation Admin		350.00 cy		1,562			/cy			2,768		1,124	5,454	6,135
	Dirtwork Dirtwork				1,562						2,768		1,124	5,454	6,135
	700 Administration Building				1,562			/LS			2,768		1,124	5,454	6,135
	312316 Excavation				206,877		156,793		425,750		276,398		141,801	1,207,620	1,295,898
312323	Fill and Backfill														
051	Site Civil														
	Dirtwork Dirtwork														
0230-	Grade Site														
	Rough Grade site	2300.600	50,000.00 sy	31.00 /mh	54,250	-	-	-	-	-	-	-	-	54,250	75,950
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.52 mnth	-	-	-	-	-	-	8,500.00 /mnth	12,920	3,500.00 /mnth	5,320	18,240	18,498
	John Deere 644 Loader (232 HP) (M)	1900.132	1.52 mnth	-	-	-	-	-	-	6,000.00 /mnth	9,120	3,700.00 /mnth	5,624	14,744	14,926
	Water Truck, 4,000 Gallon (L)	1900.210	1.52 mnth	-	-	-	-	-	-	4,500.00 /mnth	6,840	1,200.00 /mnth	1,824	8,664	8,801
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.52 mnth	-	-	-	-	-	-	2,000.00 /mnth	3,040	300.00 /mnth	456	3,496	3,557
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	1.52 mnth	-	-	-	-	-	-	3,360.00 /mnth	5,107	1,650.00 /mnth	2,508	7,615	7,717
	John Deere 750 Dozer (168 HP) (L)	1900.120	1.52 mnth	-	-	-	-	-	-	6,000.00 /mnth	9,120	3,500.00 /mnth	5,320	14,440	14,622
	Bobcat Skid Steer (85hp)- track (L)	1900.131	3.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	9,000	2,000.00 /mnth	6,000	15,000	15,180
	Grade Site		50,000.00 sy		54,250			/sy			55,147		27,052	136,449	159,252
0234-	Export Soils to Waste on site berm outside fence														
	Excavation - Mass	2317.105	21,458.00 cy	31.00 /mh	21,952	-	-	-	-	-	-	-	-	21,952	30,732
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.20 mnth	-	-	-	-	-	-	8,500.00 /mnth	10,200	3,500.00 /mnth	4,200	14,400	14,604
	John Deere 644 Loader (232 HP) (M)	1900.132	1.20 mnth	-	-	-	-	-	-	6,000.00 /mnth	7,200	3,700.00 /mnth	4,440	11,640	11,784
	John Deere 750 Dozer (168 HP) (L)	1900.120	1.20 mnth	-	-	-	-	-	-	6,000.00 /mnth	7,200	3,500.00 /mnth	4,200	11,400	11,544
	Water Truck, 4,000 Gallon (L)	1900.210	1.20 mnth	-	-	-	-	-	-	4,500.00 /mnth	5,400	1,200.00 /mnth	1,440	6,840	6,948
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	1.20 mnth	-	-	-	-	-	-	3,360.00 /mnth	4,032	1,650.00 /mnth	1,980	6,012	6,093
	(3rd Party) Dump Truck, 10 wheel (12 min loads)	1900.210	1,144.00 hr	-	-	-	-	110.00 /hr	125,840	-	-	-	-	125,840	125,840
	Seeding Mechanical Methods (Excess Spoils outside fence)	2322.060	2.00 ac	31.00 /mh	-	-	-	2,500.00 /ac	5,000	-	-	-	-	5,000	5,000
	Export Soils to Waste on site berm outside fence		21,458.00 cy		21,952			6.10 /cy	130,840		34,032		16,260	203,084	212,545
0235-	Site Backfill														
	Backfill - Mass	2319.302	2,417.00 cy	31.00 /mh	11,239	-	-	-	-	-	-	-	-	11,239	15,735
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.39 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,315	3,500.00 /mnth	1,365	4,680	4,746
	John Deere 644 Loader (232 HP) (M)	1900.132	0.39 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,340	3,700.00 /mnth	1,443	3,783	3,830
	Water Truck, 4,000 Gallon (L)	1900.210	0.39 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,755	1,200.00 /mnth	468	2,223	2,258
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.39 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,340	3,500.00 /mnth	1,365	3,705	3,752
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.39 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,310	1,650.00 /mnth	644	1,954	1,980
	Site Backfill		2,417.00 cy		11,239			/cy			11,060		5,285	27,584	32,301
0235-	Backfill Filter material under Sand Det Pond														
	Backfill - Mass	2319.302	80.00 cy	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Import Fill - Sand class C	2305.100	80.00 cy	-	-	21.00 /ton	2,520	-	-	-	-	-	-	2,520	2,520
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.11 mnth	-	-	-	-	-	-	8,500.00 /mnth	969	3,500.00 /mnth	399	1,368	1,387
	John Deere 644 Loader (232 HP) (M)	1900.132	0.11 mnth	-	-	-	-	-	-	6,000.00 /mnth	684	3,700.00 /mnth	422	1,106	1,119
	Water Truck, 4,000 Gallon (L)	1900.210	0.11 mnth	-	-	-	-	-	-	4,500.00 /mnth	513	1,200.00 /mnth	137	650	660
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.11 mnth	-	-	-	-	-	-	6,000.00 /mnth	684	3,500.00 /mnth	399	1,083	1,097
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.11 mnth	-	-	-	-	-	-	2,000.00 /mnth	228	300.00 /mnth	34	262	267
	Backfill Filter material under Sand Det Pond		600.00 cy		744		2,520	/cy			3,078		1,391	7,733	8,092
0235-	Touch up Existing Road Base Roads														
	Backfill - Mass	2319.302	1,050.00 cy	31.00 /mh	9,765	-	-	-	-	-	-	-	-	9,765	13,671
	Import Fill - Gravel Process	2305.100	1,050.00 cy	-	-	21.00 /ton	38,588	-	-	-	-	-	-	38,588	38,588
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.25 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,500	3,500.00 /mnth	875	2,375	2,405
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.25 mnth	-	-	-	-	-	-	3,360.00 /mnth	840	1,650.00 /mnth	413	1,253	1,269
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 mnth	-	-	-	-	-	-	2,000.00 /mnth	500	300.00 /mnth	75	575	585
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 mnth	-	-	-	-	-	-	3,000.00 /mnth	1,500	2,000.00 /mnth	1,000	2,500	2,530
	Sub Blade road to site during construction	2740.840	12.00 mo	-	-	-	-	2,000.00 /mo	24,000	-	-	-	-	24,000	24,000
	Touch up Existing Road Base Roads		1,050.00 cy		9,765		38,588	22.86 /cy	24,000		4,340		2,363	79,055	83,048
0235-	Rip rap at valley pans and outlets														
	Backfill - Mass	2319.302	30.00 cy	31.00 /mh	930	-	-	-	-	-	-	-	-	930	1,302
	Import Fill - Gravel Process	2305.100	30.00 cy	-	-	21.00 /ton	1,103	-	-	-	-	-	-	1,103	1,103
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 mnth	-	-	-	-	-	-	8,500.00 /mnth	289	3,500.00 /mnth	119	408	414
	John Deere 644 Loader (232 HP) (M)	1900.132	0.03 mnth	-	-	-	-	-	-	6,000.00 /mnth	204	3,700.00 /mnth	126	330	334

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0235- Rip rap at valley pans and outlets														
	Import Rip Rap - Type L (D50 = 9")	2305.450	30.00 cy	-	-	55.00 /ton	2,723	-	-	-	-	-	-	2,723	2,723
	Rip rap at valley pans and outlets		30.00 cy		930		3,825	/cy			493		245	5,493	5,875
	0250- Base under, Concrete Paving, Sidewalks, Base roads and Asphalt														
	Sub-Grade/Compact Roads	2300.600	5,400.00 sy	31.00 /mh	1,674	-	-	-	-	-	-	-	-	1,674	2,344
	Fine Grade/Compact Roads	2301.100	5,400.00 sy	31.00 /mh	3,348	-	-	-	-	-	-	-	-	3,348	4,687
	Base - Roads	2339.510	1,300.00 cy	31.00 /mh	4,030	-	-	-	-	-	-	-	-	4,030	5,642
	Import Process Gravel	2305.250	1,300.00 cy	-	-	22.00 /ton	52,910	-	-	-	-	-	-	52,910	52,910
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.50 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,000	3,500.00 /mnth	1,750	4,750	4,810
	John Deere 644 Loader (232 HP) (M)	1900.132	0.50 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,000	3,700.00 /mnth	1,850	4,850	4,910
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,250	1,200.00 /mnth	600	2,850	2,895
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.50 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,680	1,650.00 /mnth	825	2,505	2,539
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,000	300.00 /mnth	150	1,150	1,170
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,250	3,500.00 /mnth	1,750	6,000	6,085
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 mnth	-	-	-	-	-	-	3,000.00 /mnth	1,500	2,000.00 /mnth	1,000	2,500	2,530
	Base under, Concrete Paving, Sidewalks, Base roads and Asphalt		1,300.00 cy		9,052		52,910	/cy			16,680		7,925	86,567	90,521
	Dirtwork Dirtwork				107,932		97,843		154,840		124,831		60,520	545,964	591,634
	051 Site Civil				107,932		97,843	/LS	154,840		124,831		60,520	545,964	591,634
	100 Headworks														
	Dirtwork Dirtwork														
	0235- Backfill Headworks														
	Backfill - Mass	2319.302	1,886.00 cy	31.00 /mh	7,016	-	-	-	-	-	-	-	-	7,016	9,822
	Import Fill - Gravel Process	2305.100	1,457.00 cy	-	-	21.00 /ton	53,545	-	-	-	-	-	-	53,545	53,545
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.36 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,035	3,500.00 /mnth	1,250	4,284	4,345
	John Deere 644 Loader (232 HP) (M)	1900.132	0.36 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,142	3,700.00 /mnth	1,321	3,463	3,506
	Water Truck, 4,000 Gallon (L)	1900.210	0.36 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,607	1,200.00 /mnth	428	2,035	2,067
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.36 mnth	-	-	-	-	-	-	2,000.00 /mnth	714	300.00 /mnth	107	821	835
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.36 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,200	1,650.00 /mnth	589	1,789	1,813
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	Backfill Headworks		1,886.00 cy		7,016		53,545	/cy			11,697		5,695	77,952	80,992
	Dirtwork Dirtwork				7,016		53,545				11,697		5,695	77,952	80,992
	100 Headworks				7,016		53,545	/LS			11,697		5,695	77,952	80,992
	150 Influent Pump Station														
	Dirtwork Dirtwork														
	0235- Backfill Influent Pump Station														
	Backfill - Mass	2319.302	7,425.00 cy	31.00 /mh	28,312	-	-	-	-	-	-	-	-	28,312	39,636
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.84 mnth	-	-	-	-	-	-	8,500.00 /mnth	7,174	3,500.00 /mnth	2,954	10,128	10,271
	John Deere 644 Loader (232 HP) (M)	1900.132	0.84 mnth	-	-	-	-	-	-	6,000.00 /mnth	5,064	3,700.00 /mnth	3,123	8,187	8,288
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.84 mnth	-	-	-	-	-	-	11,200.00 /mnth	9,453	4,500.00 /mnth	3,798	13,251	13,440
	Water Truck, 4,000 Gallon (L)	1900.210	0.84 mnth	-	-	-	-	-	-	4,500.00 /mnth	3,798	1,200.00 /mnth	1,013	4,811	4,887
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.84 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,688	300.00 /mnth	253	1,941	1,975
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.84 mnth	-	-	-	-	-	-	6,000.00 /mnth	5,064	3,500.00 /mnth	2,954	8,018	8,119
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.84 mnth	-	-	-	-	-	-	3,360.00 /mnth	2,836	1,650.00 /mnth	1,393	4,228	4,285
	Backfill Influent Pump Station		7,425.00 cy		28,312			/cy			35,077		15,487	78,876	90,902
	0235- Influent Pump Station Under Slab Rock														
	Backfill - Mass	2319.302	60.00 cy	31.00 /mh	1,023	-	-	-	-	-	-	-	-	1,023	1,432
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 mnth	-	-	-	-	-	-	8,500.00 /mnth	383	3,500.00 /mnth	158	540	548
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 mnth	-	-	-	-	-	-	6,000.00 /mnth	270	3,700.00 /mnth	167	437	442
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 mnth	-	-	-	-	-	-	3,000.00 /mnth	135	2,000.00 /mnth	90	225	228
	Clean Rock 2" -4" Ballast	2305.050	20.00 cy	-	-	36.00 /ton	1,166	-	-	-	-	-	-	1,166	1,166
	Clean Rock 3/4"	2305.050	40.00 cy	-	-	32.00 /ton	2,074	-	-	-	-	-	-	2,074	2,074
	Influent Pump Station Under Slab Rock		60.00 cy		1,023		3,240	/cy			788		414	5,465	5,889
	Dirtwork Dirtwork				29,335		3,240				35,864		15,901	84,340	96,791
	150 Influent Pump Station				29,335		3,240	/LS			35,864		15,901	84,340	96,791
	200 Aeration Basin														
	Dirtwork Dirtwork														
	0235- Backfill Aeration Basin														
	Backfill - Mass	2319.302	4,050.00 cy	31.00 /mh	15,066	-	-	-	-	-	-	-	-	15,066	21,092
	Import Fill - Gravel Process	2305.100	1,300.00 cy	-	-	21.00 /ton	47,775	-	-	-	-	-	-	47,775	47,775
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.46 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,910	3,500.00 /mnth	1,610	5,520	5,598
	John Deere 644 Loader (232 HP) (M)	1900.132	0.46 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,760	3,700.00 /mnth	1,702	4,462	4,517
	John Deere 624 Loader (172 HP) (M)	1900.132	0.46 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,530	3,000.00 /mnth	1,380	3,910	3,961
	Water Truck, 4,000 Gallon (L)	1900.210	0.46 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,070	1,200.00 /mnth	552	2,622	2,663
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.46 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,760	3,500.00 /mnth	1,610	4,370	4,425

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0235- Backfill Aeration Basin														
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.46 mnth	-	-	-	-	-	-	2,000.00 /mnth	920	300.00 /mnth	138	1,058	1,076
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.46 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,546	1,650.00 /mnth	759	2,305	2,336
	Backfill Aeration Basin		4,050.00 cy		15,066		47,775	/cy			16,496		7,751	87,088	93,444
	0235- Aeration Basin Underslab Rock														
	Backfill - Mass	2319.302	725.00 cy	31.00 /mh	4,046	-	-	-	-	-	-	-	-	4,046	5,664
	Import Fill Stone 3/4"	2305.100	483.00 cy	-	-	34.00 /to n	26,275	-	-	-	-	-	-	26,275	26,275
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.18 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,530	3,500.00 /mnth	630	2,160	2,191
	John Deere 644 Loader (232 HP) (M)	1900.132	0.18 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,080	3,700.00 /mnth	666	1,746	1,768
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 mnth	-	-	-	-	-	-	3,000.00 /mnth	1,500	2,000.00 /mnth	1,000	2,500	2,530
	Clean Rock 2" - 4" Balast	2305.050	242.00 cy	-	-	36.00 /to n	14,113	-	-	-	-	-	-	14,113	14,113
	Aeration Basin Underslab Rock		725.00 cy		4,046		40,389	/cy			4,110		2,296	50,840	52,541
	Dirtwork Dirtwork				19,112		88,164				20,606		10,047	137,928	145,984
	200 Aeration Basin				19,112		88,164	/LS			20,606		10,047	137,928	145,984
	250 Secondary Clarifier Splitter Box														
	Dirtwork Dirtwork														
	0235- Seconday Splitte Box exterior Backfill														
	Backfill - Mass	2319.302	150.00 cy	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	366	3,500.00 /mnth	151	516	523
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	366	3,500.00 /mnth	151	516	523
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.04 mnth	-	-	-	-	-	-	3,000.00 /mnth	129	2,000.00 /mnth	86	215	218
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 mnth	-	-	-	-	-	-	2,000.00 /mnth	86	300.00 /mnth	13	99	101
	Seconday Splitte Box exterior Backfill		150.00 cy		744			/cy			946		400	2,090	2,406
	Dirtwork Dirtwork				744						946		400	2,090	2,406
	250 Secondary Clarifier Splitter Box				744			/LS			946		400	2,090	2,406
	300 Secondary Clarifiers 5 and 6														
	Dirtwork Dirtwork														
	0235- Backfill Secondary Clarifiers 5 and 6														
	Backfill - Mass	2319.302	3,510.00 cy	31.00 /mh	16,322	-	-	-	-	-	-	-	-	16,322	22,850
	Import Fill - Gravel Process	2305.100	350.00 cy	-	-	21.00 /to n	12,863	-	-	-	-	-	-	12,863	12,863
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.48 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,080	3,500.00 /mnth	1,680	5,760	5,842
	John Deere 644 Loader (232 HP) (M)	1900.132	0.48 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,880	3,700.00 /mnth	1,776	4,656	4,714
	John Deere 624 Loader (172 HP) (M)	1900.132	0.48 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,640	3,000.00 /mnth	1,440	4,080	4,133
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.48 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,880	3,500.00 /mnth	1,680	4,560	4,618
	Water Truck, 4,000 Gallon (L)	1900.210	0.48 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,160	1,200.00 /mnth	576	2,736	2,779
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.48 mnth	-	-	-	-	-	-	2,000.00 /mnth	960	300.00 /mnth	144	1,104	1,123
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.48 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,613	1,650.00 /mnth	792	2,405	2,437
	Backfill Secondary Clarifiers 5 and 6		3,510.00 cy		16,322		12,863	/cy			17,213		8,088	54,485	61,358
	0235- Clarifier 5 and 6 Under Slab Rock														
	Backfill - Mass	2319.302	230.00 cy	31.00 /mh	4,278	-	-	-	-	-	-	-	-	4,278	5,989
	Import Fill Stone 3/4"	2305.100	230.00 cy	-	-	34.00 /to n	12,512	-	-	-	-	-	-	12,512	12,512
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 644 Loader (232 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,020	3,700.00 /mnth	629	1,649	1,669
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 mnth	-	-	-	-	-	-	3,000.00 /mnth	1,500	2,000.00 /mnth	1,000	2,500	2,530
	Clean Rock 2" - 4" Ballast	2305.050	115.00 cy	-	-	36.00 /to n	6,707	-	-	-	-	-	-	6,707	6,707
	Clarifier 5 and 6 Under Slab Rock		230.00 cy		4,278		19,219	/cy			3,965		2,224	29,686	31,476
	Dirtwork Dirtwork				20,600		32,081				21,178		10,312	84,171	92,834
	300 Secondary Clarifiers 5 and 6				20,600		32,081	/LS			21,178		10,312	84,171	92,834
	350 Step Feed Process Building														
	Dirtwork Dirtwork														
	0235- Backfill Step Feed Building														
	Backfill - Mass	2319.302	4,300.00 cy	31.00 /mh	19,995	-	-	-	-	-	-	-	-	19,995	27,993
	Import Fill - Gravel Process	2305.100	3,715.00 cy	-	-	21.00 /to n	136,526	-	-	-	-	-	-	136,526	136,526
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.62 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,270	3,500.00 /mnth	2,170	7,440	7,545
	John Deere 644 Loader (232 HP) (M)	1900.132	0.62 mnth	-	-	-	-	-	-	6,000.00 /mnth	3,720	3,700.00 /mnth	2,294	6,014	6,088
	Water Truck, 4,000 Gallon (L)	1900.210	0.62 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,790	1,200.00 /mnth	744	3,534	3,590
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.62 mnth	-	-	-	-	-	-	3,360.00 /mnth	2,083	1,650.00 /mnth	1,023	3,106	3,148
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.62 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,240	300.00 /mnth	186	1,426	1,451
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	Backfill Step Feed Building		4,300.00 cy		19,995		136,526	/cy			18,103		8,417	183,041	191,402
	0235- Step Feed Basement Under Slab Rock														
	Backfill - Mass	2319.302	120.00 cy	31.00 /mh	1,488	-	-	-	-	-	-	-	-	1,488	2,083
	Import Fill Stone 3/4"	2305.100	120.00 cy	-	-	34.00 /to n	6,528	-	-	-	-	-	-	6,528	6,528

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0235- Step Feed Basement Under Slab Rock														
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 mnth	-	-	-	-	-	-	8,500.00 /mnth	383	3,500.00 /mnth	158	540	548
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 mnth	-	-	-	-	-	-	6,000.00 /mnth	270	3,700.00 /mnth	167	437	442
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 mnth	-	-	-	-	-	-	3,000.00 /mnth	135	2,000.00 /mnth	90	225	228
	Clean Rock 2" - 4" Ballast	2305.050	80.00 cy	-	-	36.00 /to n	4,666	-	-	-	-	-	-	4,666	4,666
	Step Feed Basement Under Slab Rock		120.00 cy		1,488		11,194	/cy			788		414	13,883	14,494
	Dirtwork Dirtwork				21,483		147,720				18,891		8,831	196,925	205,896
	350 Step Feed Process Building				21,483		147,720	/LS			18,891		8,831	196,925	205,896
	400 Orbal Anaerobic Reactor														
	Dirtwork Dirtwork														
	0235- Backfill Orbal Selector														
	Backfill - Mass	2319.302	880.00 cy	31.00 /mh	4,910	-	-	-	-	-	-	-	-	4,910	6,875
	Import Fill Stone 3/4"	2305.100	80.00 cy	-	-	34.00 /to n	4,352	-	-	-	-	-	-	4,352	4,352
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.22 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,870	3,500.00 /mnth	770	2,640	2,677
	John Deere 644 Loader (232 HP) (M)	1900.132	0.22 mnth	-	-	-	-	-	-	6,000.00 /mnth	1,320	3,700.00 /mnth	814	2,134	2,160
	Water Truck, 4,000 Gallon (L)	1900.210	0.22 mnth	-	-	-	-	-	-	4,500.00 /mnth	990	1,200.00 /mnth	264	1,254	1,274
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.22 mnth	-	-	-	-	-	-	3,000.00 /mnth	660	2,000.00 /mnth	440	1,100	1,113
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.22 mnth	-	-	-	-	-	-	3,360.00 /mnth	739	1,650.00 /mnth	363	1,102	1,117
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.22 mnth	-	-	-	-	-	-	2,000.00 /mnth	440	300.00 /mnth	66	506	515
	Clean Rock 2" - 4" ballast	2305.050	50.00 cy	-	-	36.00 /to n	2,916	-	-	-	-	-	-	2,916	2,916
	Backfill Orbal Selector		880.00 cy		4,910		7,268	/cy			6,019		2,717	20,915	22,999
	Dirtwork Dirtwork				4,910		7,268				6,019		2,717	20,915	22,999
	400 Orbal Anaerobic Reactor				4,910		7,268	/LS			6,019		2,717	20,915	22,999
	550 UV and Digester Blower Building														
	Dirtwork Dirtwork														
	0235- Backfill UV and Digester Blower Building														
	Backfill - Mass	2319.302	1,600.00 cy	31.00 /mh	9,920	-	-	-	-	-	-	-	-	9,920	13,888
	Import Fill - Gravel Process	2305.100	1,250.00 cy	-	-	21.00 /to n	45,938	-	-	-	-	-	-	45,938	45,938
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.43 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,655	3,500.00 /mnth	1,505	5,160	5,233
	John Deere 644 Loader (232 HP) (M)	1900.132	0.43 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,580	3,700.00 /mnth	1,591	4,171	4,223
	Water Truck, 4,000 Gallon (L)	1900.210	0.43 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,935	1,200.00 /mnth	516	2,451	2,490
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.43 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,445	1,650.00 /mnth	710	2,154	2,183
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.43 mnth	-	-	-	-	-	-	2,000.00 /mnth	860	300.00 /mnth	129	989	1,006
	Backfill UV and Digester Blower Building		1,600.00 cy		9,920		45,938	/cy			13,475		6,451	75,783	80,020
	Dirtwork Dirtwork				9,920		45,938				13,475		6,451	75,783	80,020
	550 UV and Digester Blower Building				9,920		45,938	/LS			13,475		6,451	75,783	80,020
	600 Aerobic Digester 5 and 6														
	Dirtwork Dirtwork														
	0235- Digester 5 and 6 Backfill														
	Backfill - Mass	2319.302	1,950.00 cy	31.00 /mh	9,672	-	-	-	-	-	-	-	-	9,672	13,541
	Import Fill - Gravel Process	2305.100	50.00 cy	-	-	21.00 /to n	1,838	-	-	-	-	-	-	1,838	1,838
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.37 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,137	3,500.00 /mnth	1,292	4,428	4,491
	John Deere 644 Loader (232 HP) (M)	1900.132	0.37 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,214	3,700.00 /mnth	1,365	3,579	3,624
	Water Truck, 4,000 Gallon (L)	1900.210	0.37 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,661	1,200.00 /mnth	443	2,103	2,137
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.37 mnth	-	-	-	-	-	-	6,000.00 /mnth	2,214	3,500.00 /mnth	1,292	3,506	3,550
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.37 mnth	-	-	-	-	-	-	2,000.00 /mnth	738	300.00 /mnth	111	849	863
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.37 mnth	-	-	-	-	-	-	3,360.00 /mnth	1,240	1,650.00 /mnth	609	1,849	1,873
	Digester 5 and 6 Backfill		1,950.00 cy		9,672		1,838	/cy			11,203		5,111	27,823	31,916
	0235- Digester 5 and 6 Under slab rock														
	Backfill - Mass	2319.302	133.00 cy	31.00 /mh	2,062	-	-	-	-	-	-	-	-	2,062	2,886
	Import Fill Stone 3/4"	2305.100	133.00 cy	-	-	34.00 /to n	7,235	-	-	-	-	-	-	7,235	7,235
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 mnth	-	-	-	-	-	-	8,500.00 /mnth	680	3,500.00 /mnth	280	960	974
	John Deere 644 Loader (232 HP) (M)	1900.132	0.08 mnth	-	-	-	-	-	-	6,000.00 /mnth	480	3,700.00 /mnth	296	776	786
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.08 mnth	-	-	-	-	-	-	3,000.00 /mnth	240	2,000.00 /mnth	160	400	405
	Clean Rock 2" - 4" Ballast	2305.050	80.00 cy	-	-	36.00 /to n	4,666	-	-	-	-	-	-	4,666	4,666
	Digester 5 and 6 Under slab rock		133.00 cy		2,062		11,901	/cy			1,400		736	16,098	16,951
	Dirtwork Dirtwork				11,734		13,738				12,603		5,847	43,921	48,867
	600 Aerobic Digester 5 and 6				11,734		13,738	/LS			12,603		5,847	43,921	48,867
	700 Administration Building														
	Dirtwork Dirtwork														
	0235- Admin Building Backfill														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0235-	Admin Building Backfill														
	Backfill - Mass	2319.302	400.00 cy	31.00 /mh	2,976	-	-	-	-	-	-	-	-	2,976	4,166
	Import Fill - Gravel Process	2305.100	300.00 cy	-	-	21.00 /ton	11,025	-	-	-	-	-	-	11,025	11,025
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.14 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,190	3,500.00 /mnth	490	1,680	1,704
	John Deere 644 Loader (232 HP) (M)	1900.132	0.14 mnth	-	-	-	-	-	-	6,000.00 /mnth	840	3,700.00 /mnth	518	1,358	1,375
	Water Truck, 4,000 Gallon (L)	1900.210	0.14 mnth	-	-	-	-	-	-	4,500.00 /mnth	630	1,200.00 /mnth	168	798	811
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	3,000	2,000.00 /mnth	2,000	5,000	5,060
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.14 mnth	-	-	-	-	-	-	2,000.00 /mnth	280	300.00 /mnth	42	322	328
	Admin Building Backfill		400.00 cy		2,976		11,025	/cy			5,940		3,218	23,159	24,468
	Dirtwork Dirtwork				2,976		11,025				5,940		3,218	23,159	24,468
	700 Administration Building				2,976		11,025	/LS			5,940		3,218	23,159	24,468
	312323 Fill and Backfill				235,760		500,561		154,840		272,048		129,938	1,293,147	1,392,892
321216	Asphalt Paving														
051	Site Civil														
	Asphalt Asphalt														
0254-	Admin Parking														
	Bituminous Base Course 6"	2740.120	645.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Bituminous Binder Course 2"	2740.120	645.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Proof Roll/Regrade Asphalt Subgrade	2740.840	645.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Bituminous Top Course 2"	2740.120	645.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Asphalt Subcont. Mobilization	2740.840	1.00 ls	-	-	-	-	0.00 /ls	0	-	-	-	-	0	0
	Asphalt Tack Coat	2740.840	645.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Asphalt Subcont. Bond	2740.840	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Asphalt Subcont.	2740.840	1.00 ls	-	-	-	-	46,664.00 /ls	46,664	-	-	-	-	46,664	46,664
	Asphalt Contingency	2740.840	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Precast Item # 1 Parking Blocks	2327.005	12.00 ea	31.00 /mh	-	/ls	-	-	-	-	-	-	-	-	-
	Steel Pins f/ Parking Blocks	2327.005	24.00 ea	31.00 /mh	0	100.00 /ls	2,400	-	-	-	-	-	-	2,400	2,400
	Striping Subcontractor	2740.840	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Admin Parking		1,290.00 sy		0		2,400	36.17 /sy	46,664					49,064	49,064
0254-	Step Feed Area														
	Bituminous Base Course 6"	2740.120	1,363.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Bituminous Binder Course 2"	2740.120	1,363.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Bituminous Top Course 2"	2740.120	1,363.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Proof Roll/Regrade Asphalt Subgrade	2740.840	1,363.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Asphalt Tack Coat	2740.840	1,363.00 sy	-	-	-	-	0.00 /sy	0	-	-	-	-	0	0
	Asphalt Subcont. Mobilization	2740.840	1.00 ls	-	-	-	-	0.00 /ls	0	-	-	-	-	0	0
	Asphalt Subcont. Bond	2740.840	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Asphalt Subcont.	2740.840	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Asphalt Contingency	2740.840	1.00 ls	-	-	-	-	-	-	-	-	-	-	-	-
	Asphalt Asphalt				0		2,400		46,664					49,064	49,064
	051 Site Civil				0		2,400	/LS	46,664					49,064	49,064
	321216 Asphalt Paving				0		2,400		46,664					49,064	49,064
330513	Manholes														
052	Yard Piping														
	Manhole Manhole														
026-1-	4' MH For Decant at Digesters 3&4														
	Supply Precast Package	2327.005	1.00 ls	-	-	84,000.00 /ls	84,000	-	-	-	-	-	-	84,000	84,000
	Set and test	2327.020	1.00 ea	31.00 /mh	1,116	-	-	250.00 /ea	250	/ea	-	-	-	1,366	1,812
	Manhole 4' Riser	2327.010	10.00 vf	31.00 /mh	-	0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Riser Coating	2327.010	10.00 vf	31.00 /mh	-	0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Brick Extensions	2327.010	1.00 ea	31.00 /mh	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Frame & Cover - Watertight	2327.120	1.00 ea	31.00 /mh	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Boots 6"	2327.090	2.00 ea	31.00 /mh	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Special - Grout Riser to CIP Base	2327.010	1.00 ea	31.00 /mh	-	200.00 /ea	200	-	-	-	-	-	-	200	200
	MH Marker Post	2519.100	1.00 ea	31.00 /mh	-	250.00 /ea	250	-	-	-	-	-	-	250	250
	4' MH For Decant at Digesters 3&4		10.00 vf		1,116		84,450	25.00 /vf	250					85,816	86,263
026-1-	4' MH For Decant at Digester 5&6														
	Supply Precast Package	2327.005	1.00 ls	-	-	/ls	-	-	-	-	-	-	-	-	-
	Set and test	2327.020	1.00 ea	31.00 /mh	1,116	-	-	250.00 /ea	250	/ea	-	-	-	1,366	1,812
	Cast-In-Place Manhole 4' Base & Invert	2327.010	1.00 ea	31.00 /mh	-	625.00 /ea	625	-	-	-	-	-	-	625	625
	Manhole 4' Riser	2327.010	10.00 vf	31.00 /mh	-	0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Riser Coating	2327.010	10.00 vf	31.00 /mh	-	0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Brick Extensions	2327.010	1.00 ea	31.00 /mh	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Frame & Cover - Watertight	2327.120	1.00 ea	31.00 /mh	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Boots 6"	2327.090	2.00 ea	31.00 /mh	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Special - Grout Riser to CIP Base	2327.010	1.00 ea	31.00 /mh	-	200.00 /ea	200	-	-	-	-	-	-	200	200
	MH Marker Post	2519.100	1.00 ea	31.00 /mh	-	250.00 /ea	250	-	-	-	-	-	-	250	250

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	4' MH For Decant at Digester 5&6		10.00 vf		1,116		1,075	25.00 /vf	250					2,441	2,888
026-1-	5' MH For IPS Influent														
	Supply Precast Package	2327.005	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Set and test	2327.020	1.00 ea	31.00 /mh	1,488	-	-	250.00 /ea	250	/ea		-	-	1,738	2,333
	Cast-In-Place Manhole 6' Base & Invert	2327.030	1.00 ea	31.00 /mh		180.00 /ea	180	-	-	-	-	-	-	180	180
	Manhole 6' Riser	2327.030	17.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 6' Riser Coating	2327.030	17.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 6' Brick Extensions	2327.030	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Frame & Cover - Watertight	2327.120	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Special - Grout Riser to CIP Base	2327.010	1.00 ea	31.00 /mh		200.00 /ea	200	-	-	-	-	-	-	200	200
	MH Marker Post	2519.100	1.00 ea	31.00 /mh		250.00 /ea	250	-	-	-	-	-	-	250	250
	Import Road Base Class 6	2305.100	2.00 cy	-	-	22.00 /to n	79	-	-	-	-	-	-	79	79
	5' MH For IPS Influent		17.00 vf		1,488		710	14.71 /vf	250					2,448	3,043
026-1-	4' MH For IPS Effluent (Bypass Pumping Connection)														
	Supply Precast Package	2327.005	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Set and test	2327.020	1.00 ea	31.00 /mh	868	-	-	250.00 /ea	250	/ea		-	-	1,118	1,465
	Manhole 4' Riser	2327.010	4.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Riser Coating	2327.010	4.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Brick Extensions	2327.010	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Frame & Cover - Watertight	2327.120	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Utility Bedding Stone 3/4"	2305.200	3.00 cy	-	-	34.00 /to n	163	-	-	-	-	-	-	163	163
	MH Marker Post	2519.100	1.00 ea	31.00 /mh		250.00 /ea	250	-	-	-	-	-	-	250	250
	4' MH For IPS Effluent (Bypass Pumping Connection)		6.00 vf		868		413	41.67 /vf	250					1,531	1,879
026-1-	Precast Utility Vault For IPS Effluent														
	Supply Precast Package	2327.005	2.00 ls	-	-	/ls		-	-	-	-	-	-		
	Frame & Grate - Double Locking	2327.120	2.00 ea	31.00 /mh	5,952	0.01 /ea	0	-	-	-	-	-	-	5,952	8,333
	Precast Vault - 8' x 6'	2327.070	2.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Road Base Below Concrete	2305.300	8.00 cy	31.00 /mh		22.00 /to n	348	-	-	-	-	-	-	348	348
	Core Drilled Hole - 14 x 8"	15122.100	8.00 ea	31.00 /mh		525.00 /ea	4,200	300.00 /ea	2,400	-	-	-	-	6,600	6,600
	Grove RT760/RT700, 60 ton, wo/operator (240 HP) (L)	1900.100	0.25 mnth	-	-	350.00 /m nt h	88	-	-	9,500.00 /mnth	2,375	1,500.00 /mnth	375	2,838	2,885
	Import Road Base Class 6	2305.100	10.00 cy	-	-	22.00 /to n	396	-	-	-	-	-	-	396	396
	Precast Utility Vault For IPS Effluent		16.00 vf		5,952		5,032	150.00 /vf	2,400		2,375		375	16,134	18,562
026-1-	Scum Box														
	Supply Precast Package	2327.005	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Set and test	2327.020	1.00 ea	31.00 /mh	1,116	-	-	250.00 /ea	250	/ea		-	-	1,366	1,812
	Manhole 6' Base	2327.030	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole 6' Riser	2327.030	12.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 6' Riser Coating	2327.030	12.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 6' Brick Extensions	2327.030	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole 6' Formed Invert (Delete If By Supplier)	2327.030	1.00 ea	31.00 /mh		180.00 /ea	180	-	-	-	-	-	-	180	180
	Frame & Cover - Watertight	2327.120	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Boots 2"	2327.090	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole Boots 4"	2327.090	3.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Road Base Below Concrete	2305.300	2.25 cy	31.00 /mh		22.00 /to n	98	-	-	-	-	-	-	98	98
	Scum Box		12.00 vf		1,116		278	20.83 /vf	250					1,644	2,091
026-1-	1.5" NPW CONTROL VALVE MH														
	Supply Precast Package	2327.005	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Cast-In-Place Manhole 4' Base & Invert	2327.010	1.00 ea	31.00 /mh	744	625.00 /ea	625	-	-	-	-	-	-	1,369	1,667
	Manhole 4' Riser	2327.010	4.00 vf	31.00 /mh		0.01 /vf	0	-	-	-	-	-	-	0	0
	Manhole 4' Brick Extensions	2327.010	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Frame & Cover - Watertight	2327.120	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	Manhole 4' Flat Cover	2327.010	1.00 ea	31.00 /mh		0.01 /ea	0	-	-	- /ch	-	-	-	0	0
	Import Road Base Class 6	2305.100	2.00 cy	-	-	22.00 /to n	79	-	-	-	-	-	-	79	79
	1.5" NPW CONTROL VALVE MH		4.00 vf		744		704	/vf						1,448	1,746
0308-	CIP Base for IPS Influent Line														
	4500 psi Concrete	3310.100	4.00 cy	-	-	165.00 /cy	706	-	-	-	-	-	-	706	706
	Slab Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Crane Place Slab on Grade	3310.230	4.00 cy	31.00 /mh	398	-	-	-	-	-	-	-	-	398	557
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	65.97 sf	31.00 /mh	654	1.50 /sf	104	-	-	-	-	-	-	758	1,020
	Finegrade Below Concrete	3150.650	28.27 sf	31.00 /mh	12	-	-	-	-	-	-	-	-	12	17
	Finish- Hard Trowel	3350.110	28.27 sf	31.00 /mh	12	/sf		-	-	-	-	-	-	12	17
	Cure With Burlap	3390.170	28.27 sf	31.00 /mh	2	0.05 /sf	1	-	-	-	-	-	-	3	4
	Keyway 4"	3150.620	16.00 lf	31.00 /mh	124	1.00 /lf	17	-	-	-	-	-	-	141	190

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0308-	CIP Base for IPS Influent Line														
	Road Base Below Concrete	2305.300	1.05 cy	31.00 /mh	16	22.00 /ton	46	-	-	-	-	-	-	62	68
	Oil SOG Form	3100.310	65.97 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Nails and Hardware	3150.200	65.97 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Dimension Lumber	3150.200	65.97 sf	31.00 /mh	0	0.50 /sf	33	-	-	-	-	-	-	33	33
	SOG Rebar	3210.104	0.25 tn	31.00 /mh	233	1,400.00 /tn	368	-	-	-	-	-	-	601	694
	Non Shrink Grout	3150.700	6.00 cf	31.00 /mh	372	60.00 /cf	360	-	-	-	-	-	-	732	881
	CIP Base for IPS Influent Line		3.67 cy		1,824		1,639	/cy						3,463	4,192
	Manhole Manhole				14,224		94,302		3,650		2,375		375	114,926	120,663
	052 Yard Piping				14,224		94,302	/LS	3,650		2,375		375	114,926	120,663
	330513 Manholes				14,224		94,302		3,650		2,375		375	114,926	120,663
334101	Storm Drain Sanitary Sewer and Drainage Piping														
	052 Yard Piping														
	RCP RCP														
	02632- 12" RCP at Entrance														
	Trench Excavtion 4- 6'	2333.010	72.00 lf	31.00 /mh	335	-	-	-	-	-	-	-	-	335	469
	Trench Backfill 4- 6'	2333.020	72.00 lf	31.00 /mh	446	-	-	-	-	-	-	-	-	446	625
	Utility Bedding Peastone	2305.200	24.00 cy	-	-	24.00 /ton	922	-	-	-	-	-	-	922	922
	Spoils to Waste	2333.060	24.00 cy	31.00 /mh	74	-	-	-	-	-	-	-	-	74	104
	RCP Class III O-Ring Joint 12	2632.103	72.00 lf	31.00 /mh	893	0.01 /lf	1	-	-	-	-	-	-	894	1,251
	RCP O-Ring Joint 12" Flare End	2632.152	2.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.07 mnth	-	-	-	-	-	-	8,500.00 /mnth	595	3,500.00 /mnth	245	840	852
	John Deere 624 Loader (172 HP) (M)	1900.132	0.07 mnth	-	-	-	-	-	-	5,500.00 /mnth	385	3,000.00 /mnth	210	595	603
	Water Truck, 4,000 Gallon (L)	1900.210	0.07 mnth	-	-	-	-	-	-	4,500.00 /mnth	315	1,200.00 /mnth	84	399	405
	Mikasa Jumping Jack Compactor (L)	1900.138	0.07 mnth	-	-	-	-	-	-	200.00 /mnth	14	100.00 /mnth	7	21	21
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.07 mnth	-	-	-	-	-	-	2,000.00 /mnth	140	300.00 /mnth	21	161	164
	Dump Fees & Trash Haul	1162.100	1.00 ea	-	-	400.00 /ea	400	-	-	-	-	-	-	400	400
	12" RCP at Entrance		72.00 lf		1,934		1,322	/lf			1,449		567	5,273	6,076
	RCP RCP				1,934		1,322				1,449		567	5,273	6,076
	052 Yard Piping				1,934		1,322	/LS			1,449		567	5,273	6,076
	334101 Storm Drain Sanitary Sewer and Drainage Piping				1,934		1,322				1,449		567	5,273	6,076
352016	Fabricated Slide Gates and Stop Logs														
	100 Headworks														
	GEN General														
	11-15 Fabricated Slide Gates														
	Supply Slide Gate Package (Hydro Gate)	11500.050	1.00 ls	-	-	187,414.00 /ls	187,414	-	-	-	-	-	-	187,414	187,414
	Slide Gate 24" x 18"	11500.050	1.00 ea	31.00 /mh	1,240	/ea	-	-	-	-	-	-	-	1,240	1,736
	Slide Gate 24" x 48"	11500.050	1.00 ea	31.00 /mh	1,240	/ea	-	-	-	-	-	-	-	1,240	1,736
	Slide Gate 30" x 42" Elect Actuator	11500.050	3.00 ea	31.00 /mh	5,952	/ea	-	-	-	-	-	-	-	5,952	8,333
	Slide Gate 30" x 48"	11500.050	2.00 ea	31.00 /mh	2,480	/ea	-	-	-	-	-	-	-	2,480	3,472
	Slide Gate 36" x 48"	11500.050	5.00 ea	31.00 /mh	6,200	/ea	-	-	-	-	-	-	-	6,200	8,680
	Leak Test Slide Gates	11500.050	12.00 ea	31.00 /mh	2,976	250.00 /ea	3,000	-	-	-	-	-	-	5,976	7,166
	Grout Equipment	11000.005	24.00 cf	31.00 /mh		60.00 /cf	1,440	-	-	-	-	-	-	1,440	1,440
	Anchors for Gates	11500.050	144.00 ea	31.00 /mh	893	15.00 /ea	2,160	-	-	-	-	-	-	3,053	3,410
	Fabricated Slide Gates		17.00 ea		20,981		194,014	/ea						214,995	223,387
	GEN General				20,981		194,014							214,995	223,387
	100 Headworks				20,981		194,014	/LS						214,995	223,387
	150 Influent Pump Station														
	GEN General														
	11-15 Fabricated Slide Gate														
	Supply Slide Gate Package	11500.050	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Slide Gate 36" x 36"	11500.050	3.00 ea	31.00 /mh	5,952	/ea		-	-	-	-	-	-	5,952	8,333
	Leak Test Slide Gates	11500.050	3.00 ea	31.00 /mh	744	250.00 /ea	750	-	-	-	-	-	-	1,494	1,792
	Grout Equipment	11000.005	3.00 cf	31.00 /mh		60.00 /cf	180	-	-	-	-	-	-	180	180
	Anchors for Gates	11500.050	30.00 ea	31.00 /mh	186	15.00 /ea	450	-	-	-	-	-	-	636	710
	Fabricated Slide Gate		3.00 ea		6,882		1,380	/ea						8,262	11,015
	GEN General				6,882		1,380							8,262	11,015
	150 Influent Pump Station				6,882		1,380	/LS						8,262	11,015
	250 Secondary Clarifier Splitter Box														
	GEN General														
	11-15 Slide Gate														
	Supply Slide Gate Package	11500.050	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Slide Gate 24" x 30"	11500.050	2.00 ea	31.00 /mh	3,720	/ea		-	-	-	-	-	-	3,720	5,208
	Leak Test Slide Gates	11500.050	2.00 ea	31.00 /mh	496	250.00 /ea	500	-	-	-	-	-	-	996	1,194
	Grout Equipment	11000.005	2.00 cf	31.00 /mh		60.00 /cf	120	-	-	-	-	-	-	120	120
	Anchors for Gates	11500.050	20.00 ea	31.00 /mh	124	15.00 /ea	300	-	-	-	-	-	-	424	474

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	Slide Gate		2.00 ea		4,340		920	/ea						5,260	6,996
	GEN General				4,340		920							5,260	6,996
	250 Secondary Clarifier Splitter Box				4,340		920	/LS						5,260	6,996
550 UV	and Digester Blower Building														
GEN	General														
	11-15 Fabricated Slide Gates														
	Supply Slide Gate Package	11500.050	1.00 ls	-	-	/ls		-	-	-	-	-	-	-	
	Slide Gate 24" x 48"	11500.050	3.00 ea	31.00 /mh	4,464	/ea		-	-	-	-	-	-	4,464	6,250
	Leak Test Slide Gates	11500.050	3.00 ea	31.00 /mh	744	300.00 /ea	900	-	-	-	-	-	-	1,644	1,942
	Grout Equipment	11000.005	3.00 cf	31.00 /mh		60.00 /cf	180	-	-	-	-	-	-	180	180
	Anchors for Gates	11500.050	24.00 ea	31.00 /mh	149	15.00 /ea	360	-	-	-	-	-	-	509	568
	Fabricated Slide Gates		3.00 ea		5,357		1,440	/ea						6,797	8,940
	GEN General				5,357		1,440							6,797	8,940
	550 UV and Digester Blower Building				5,357		1,440	/LS						6,797	8,940
600 Aerobic	Digester 5 and 6														
GEN	General														
	11-15 Fabricated Slide Gate														
	Supply Slide Gate Package	11500.050	1.00 ls	-	-	/ls		-	-	-	-	-	-	-	
	Slide Gate 24" x 24"	11500.050	1.00 ea	31.00 /mh	1,984	/ea		-	-	-	-	-	-	1,984	2,778
	Leak Test Slide Gates	11500.050	1.00 ea	31.00 /mh	248	250.00 /ea	250	-	-	-	-	-	-	498	597
	Grout Equipment	11000.005	0.08 cf	31.00 /mh		60.00 /cf	5	-	-	-	-	-	-	5	5
	Anchors for Gates	11500.050	10.00 ea	31.00 /mh	62	15.00 /ea	150	-	-	-	-	-	-	212	237
	Fabricated Slide Gate		1.00 ea		2,294		405	/ea						2,699	3,617
	GEN General				2,294		405							2,699	3,617
	600 Aerobic Digester 5 and 6				2,294		405	/LS						2,699	3,617
	352016 Fabricated Slide Gates and Stop Logs				39,854		198,159							238,013	253,954
402700	Process Pipe - General														
001	General														
General															
07	5- Insulation - Interior Blower and chem heat trace														
	Sub heat trace and insulation sub	7210.110	1.00 ls	-	-	-	-	25,000.00 /ls	25,000	-	-	-	-	25,000	25,000
	Heat Trace	16000.001	2.00 ea	31.00 /mh		3,500.00 /ea	7,000			-	-	-	-	7,000	7,000
	Insulation - Interior Blower and chem heat trace						7,000	/sf	25,000					32,000	32,000
	General						7,000		25,000					32,000	32,000
GEN	General														
01	-100 Pipe General Conditions														
	Mechanical Foreman	1000.100	24.00 wk	1,500.00 /wk	36,000	-	-	-	-	-	-	-	-	36,000	50,400
	Pickup	1900.210	6.00 mnth	-	-	-	-	-	-	836.00 /mnth	5,016	514.00 /mnth	3,084	8,100	8,200
	Pipe Shop Drawings	1060.100	1.00 ls	-	-	10,000.00 /ls	10,000	-	-	-	-	-	-	10,000	10,000
	Skyjack/Genie 19' Scissor Lift (Requires Power Source)	1900.300	8.00 mnth	-	-	-	-	-	-	800.00 /mnth	6,400	100.00 /mnth	800	7,200	7,328
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	2.00 mnth	7,296.00 /mnth	14,592	350.00 /m nt h	700	-	-	9,500.00 /mnth	19,000	1,500.00 /mnth	3,000	37,292	43,509
	Off Load Misc Deliveries	1640.100	1.00 ls	31.00 /mh	2,480	-	-	-	-	/hr		-	-	2,480	3,472
	Hoisting Costs	1485.100	1.00 mnth	31.00 /mh		3,500.00 /m nt h	3,500	-	-	-	-	-	-	3,500	3,500
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	8.00 mnth	-	-	-	-	-	-	3,500.00 /mnth	28,000	1,200.00 /mnth	9,600	37,600	38,160
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	12.00 mnth	-	-	-	-	-	-	3,000.00 /mnth	36,000	1,200.00 /mnth	14,400	50,400	51,120
	Supply Pipe support Package	15233.505	1.00 ls	-	-	310,000.00 /ls	310,000	-	-	-	-	-	-	310,000	310,000
	Pipe General Conditions				53,072		324,200	/wk			94,416		30,884	502,572	525,689
	GEN General				53,072		324,200				94,416		30,884	502,572	525,689
	001 General				53,072		331,200	/LS	25,000		94,416		30,884	534,572	557,689
052 Yard Piping															
304SS 304SS															
02645- 2" AHP															
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 4- 6'	2333.010	300.00 lf	31.00 /mh	1,395	-	-	-	-	-	-	-	-	1,395	1,953
	Trench Backfill 4- 6'	2333.020	300.00 lf	31.00 /mh	1,860	-	-	-	-	-	-	-	-	1,860	2,604
	Utility Bedding Squeegee	2305.200	45.00 cy	-	-	24.00 /to n	1,782	-	-	-	-	-	-	1,782	1,782
	Spoils to Waste	2333.060	45.00 cy	31.00 /mh	140	-	-	-	-	-	-	-	-	140	195
	Stainless Steel Pipe 2" S40 316SS Seamless	15212.005	460.00 lf	31.00 /mh	2,852	35.00 /lf	16,100	-	-	-	-	-	-	18,952	20,093
	Stainless Steel 90 Elbow 2"	15212.040	12.00 ea	31.00 /mh	74	610.00 /ea	7,320	-	-	-	-	-	-	7,394	7,424
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.34 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,890	3,500.00 /mnth	1,190	4,080	4,138
	John Deere 624 Loader (172 HP) (M)	1900.132	0.34 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,870	3,000.00 /mnth	1,020	2,890	2,927
	Water Truck, 4,000 Gallon (L)	1900.210	0.34 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,530	1,200.00 /mnth	408	1,938	1,969
	Mikasa Jumping Jack Compactor (L)	1900.138	0.34 mnth	-	-	-	-	-	-	200.00 /mnth	68	100.00 /mnth	34	102	103

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02645- 2" AHP														
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.34 mnth	-	-	-	-	-	-	2,000.00 /mnth	680	300.00 /mnth	102	782	796
	Warning Tape Detectable	2333.080	300.00 lf	31.00 /mh	93	0.07 /lf	21	-	-	-	-	-	-	114	151
	Stainless Steel Companion Flange 2	15212.084	3.00 ea	31.00 /mh	19	450.00 /ea	1,350	-	-	-	-	-	-	1,369	1,376
	Stainless Steel Coupling 2"	15212.025	20.00 ea	31.00 /mh	124	200.00 /ea	4,000	-	-	-	-	-	-	4,124	4,174
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	31.00 /mh	186	15.00 /lf	300	-	-	-	-	-	-	486	560
	Field Welding - Stainless	5000.985	16.00 hrs	31.00 /mh	496	/hr s		110.00 /hrs	1,760	/hrs		-	-	2,256	2,454
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cross Existing	2333.010	3.00 ea	31.00 /mh	186	100.00 /ea	300	-	-	-	-	-	-	486	560
	2" AHP		300.00 lf		8,293		31,273	5.87 /lf	1,760		7,138		2,754	51,218	54,677
	304SS 304SS				8,293		31,273		1,760		7,138		2,754	51,218	54,677
	CEL DI Ceramic Epoxy Lined DI														
	02643- 10" ALP From Existing to Digester 5&6														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 4- 6'	2333.010	90.00 lf	31.00 /mh	419	-	-	-	-	-	-	-	-	419	586
	Trench Backfill 4- 6'	2333.020	90.00 lf	31.00 /mh	558	-	-	-	-	-	-	-	-	558	781
	Utility Bedding Peastone	2305.200	27.35 cy	-	-	24.00 /to n	1,050	-	-	-	-	-	-	1,050	1,050
	Spoils to Waste	2333.060	27.35 cy	31.00 /mh	85	-	-	-	-	-	-	-	-	85	119
	DI Pipe RJ - Class 350 6 (Ceramic Lined)	2511.401	26.00 lf	31.00 /mh	81	43.00 /lf	1,230	-	-	-	-	-	-	1,310	1,343
	DI Pipe RJ - Class 350 10 Ceramic Lined)	2511.401	64.00 lf	31.00 /mh	238	70.00 /lf	4,928	-	-	-	-	-	-	5,166	5,261
	DI RJ Compact 90 6 (Ceramic Lined)	2511.514	2.00 ea	31.00 /mh	124	685.00 /ea	1,370	-	-	-	-	-	-	1,494	1,544
	DI RJ Compact 45 10 (Ceramic Lined)	2511.514	1.00 ea	31.00 /mh	62	1,135.00 /ea	1,135	-	-	-	-	-	-	1,197	1,222
	DI RJ Compact Solid Sleeve Long 10 (Ceramic Lined)	2511.522	2.00 ea	31.00 /mh	186	1,140.00 /ea	2,280	-	-	-	-	-	-	2,466	2,540
	Polybag 12" and Smaller	2333.090	90.00 lf	31.00 /mh	28	0.75 /lf	74	-	-	-	-	-	-	102	113
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Pot Hole Existing	2333.010	2.00 ea	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Cut Existing	2333.010	2.00 ea	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Tie to Existing	2333.010	2.00 ea	31.00 /mh	992	50.00 /ea	100	-	-	-	-	-	-	1,092	1,489
	Warning Tape Detectable	2333.080	90.00 lf	31.00 /mh	28	0.07 /lf	6	-	-	-	-	-	-	34	45
	Tracer Wire	2333.080	110.00 lf	31.00 /mh	34	0.25 /lf	30	-	-	-	-	-	-	64	78
	Tracer Wire Test Box	2333.080	4.00 ea	31.00 /mh	124	95.00 /ea	380	-	-	-	-	-	-	504	554
	3500 psi Thrust Block Concrete	3310.105	1.50 cy	31.00 /mh	186	165.00 /cy	260	-	-	-	-	-	-	446	520
	DI Pipe 6in. dia FxPE - 7ft. 6in.	15221.030	2.00 ea	31.00 /mh	124	800.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	10" ALP From Existing to Digester 5&6		90.00 lf		3,888		14,494	/lf			3,569		1,377	23,327	24,954
	02643-1- 18" ALP From Process Bldg. To Aeration Basin														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 8-10'	2333.010	164.00 lf	31.00 /mh	1,017	-	-	-	-	-	-	-	-	1,017	1,424
	Trench Backfill 8-10'	2333.020	164.00 lf	31.00 /mh	1,525	-	-	-	-	-	-	-	-	1,525	2,135
	Utility Bedding Stone 3/4"	2305.200	74.41 cy	-	-	34.00 /to n	4,048	-	-	-	-	-	-	4,048	4,048
	Spoils to Waste	2333.060	74.41 cy	31.00 /mh	231	-	-	-	-	-	-	-	-	231	323
	DI Pipe RJ - Class 250 18 (Ceramic Lined)	2511.401	164.00 lf	31.00 /mh	915	152.00 /lf	27,421	-	-	-	-	-	-	28,336	28,702
	DI RJ Compact 90 18 (Ceramic Lined)	2511.514	1.00 ea	31.00 /mh	186	4,160.00 /ea	4,160	-	-	-	-	-	-	4,346	4,420
	DI RJ Compact 45 18 (Ceramic Lined)	2511.514	2.00 ea	31.00 /mh	372	3,460.00 /ea	6,920	-	-	-	-	-	-	7,292	7,441
	DI RJ Compact Tee 18x16 (Ceramic Lined)	2511.524	1.00 ea	31.00 /mh	248	5,931.00 /ea	5,931	-	-	-	-	-	-	6,179	6,278
	DI RJ Compact Cap 18 (Ceramic Lined)	2511.510	1.00 ea	31.00 /mh	124	3,300.00 /ea	3,300	-	-	-	-	-	-	3,424	3,474
	Polybag 18" and smaller	2333.090	164.00 lf	31.00 /mh	51	1.40 /lf	253	-	-	-	-	-	-	303	324
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,210	3,500.00 /mnth	910	3,120	3,164
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,430	3,000.00 /mnth	780	2,210	2,239
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,170	1,200.00 /mnth	312	1,482	1,505
	Mikasa Jumping Jack Compactor (L)	1900.138	0.26 mnth	-	-	-	-	-	-	200.00 /mnth	52	100.00 /mnth	26	78	79
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.26 mnth	-	-	-	-	-	-	2,000.00 /mnth	520	300.00 /mnth	78	598	608
	Warning Tape Detectable	2333.080	164.00 lf	31.00 /mh	51	0.07 /lf	11	-	-	-	-	-	-	62	83
	Tracer Wire	2333.080	164.00 lf	31.00 /mh	51	0.25 /lf	45	-	-	-	-	-	-	96	116
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	5.00 cy	31.00 /mh	620	165.00 /cy	866	-	-	-	-	-	-	1,486	1,734
	DI Pipe 16in. dia FxPE - 7ft. 0in. (Ceramic Lined)	15221.030	1.00 ea	31.00 /mh	124	5,100.00 /ea	5,100	-	-	-	-	-	-	5,224	5,274
	DI Pipe 18in. dia FxPE - 10ft. 0in.(Ceramic Lined)	15221.030	1.00 ea	31.00 /mh	124	5,100.00 /ea	5,100	-	-	-	-	-	-	5,224	5,274
	18" ALP From Process Bldg. To Aeration Basin		164.00 lf		6,134		63,395	/lf			5,432		2,106	77,067	79,630
	02643-1- 36" RS From MH to IPS														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 18-20	2333.010	72.00 lf	31.00 /mh	893	-	-	-	-	-	-	-	-	893	1,250
	Trench Backfill 18-20	2333.020	72.00 lf	31.00 /mh	1,339	-	-	-	-	-	-	-	-	1,339	1,875
	Trench Box 20' Deep	2333.030	72.00 lf	31.00 /mh	0	-	-	-	-	32.00 /lf	2,304	-	-	2,304	2,350
	Utility Bedding Stone 3/4"	2305.200	66.67 cy	-	-	34.00 /to n	3,627	-	-	-	-	-	-	3,627	3,627

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02643-1-	36" RS From MH to IPS														
	Spoils to Waste	2333.060	66.67 cy	31.00 /mh	207	-	-	-	-	-	-	-	-	207	289
	DI Pipe RJ - Class 350 36 (Ceramic Lined)	2511.401	80.00 lf	31.00 /mh	694	545.00 /lf	47,960	-	-	-	-	-	-	48,654	48,932
	DI RJ Compact 45 36 (Ceramic Lined)	2511.514	3.00 ea	31.00 /mh	1,674	17,800.00 /ea	53,400	-	-	-	-	-	-	55,074	55,744
	DI RJ Compact Solid Sleeve Long 36 (Ceramic Lined)	2511.522	1.00 ea	31.00 /mh	558	14,600.00 /ea	14,600	-	-	-	-	-	-	15,158	15,381
	Polybag 36" and smaller	2333.090	72.00 lf	31.00 /mh	22	2.30 /lf	182	-	-	-	-	-	-	204	213
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.60 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,100	3,500.00 /mnth	2,100	7,200	7,302
	John Deere 624 Loader (172 HP) (M)	1900.132	0.60 mnth	-	-	-	-	-	-	5,500.00 /mnth	3,300	3,000.00 /mnth	1,800	5,100	5,166
	Water Truck, 4,000 Gallon (L)	1900.210	0.60 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,700	1,200.00 /mnth	720	3,420	3,474
	Mikasa Jumping Jack Compactor (L)	1900.138	0.60 mnth	-	-	-	-	-	-	200.00 /mnth	120	100.00 /mnth	60	180	182
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.60 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,200	300.00 /mnth	180	1,380	1,404
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	992	50.00 /ea	50	-	-	-	-	-	-	1,042	1,439
	Plug Existing	2333.010	1.00 ea	31.00 /mh	992	250.00 /ea	250	-	-	-	-	-	-	1,242	1,639
	Warning Tape Detectable	2333.080	60.00 lf	31.00 /mh	19	0.07 /lf	4	-	-	-	-	-	-	23	30
	Tracer Wire	2333.080	100.00 lf	31.00 /mh	31	0.25 /lf	28	-	-	-	-	-	-	59	71
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	4.50 cy	31.00 /mh	837	165.00 /cy	780	-	-	-	-	-	-	1,617	1,951
	DI Wall Pipe MJ x PE w/ Collar & Tapped Holes 36in x 2ft 0in long	15221.388	1.00 ea	31.00 /mh	310	16,200.00 /ea	16,200	-	-	-	-	-	-	16,510	16,634
	Trench Stabilization Rock	2305.050	25.00 cy	-	-	36.00 /ton	1,458	-	-	-	-	-	-	1,458	1,458
	Dewatering	2240.050	1.00 ls	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Bypass Pumping???	2240.150	1.00 ls	31.00 /mh	1,984	/ls	-	8,000.00 /ls	8,000	/ls	-	-	-	9,984	10,778
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.25 mnth	7,296.00 /mnth	1,824	350.00 /mnt h	88	-	-	9,500.00 /mnth	2,375	1,500.00 /mnth	375	4,662	5,439
	36" RS From MH to IPS		72.00 lf		14,298		138,866	111.11 /lf	8,000		17,149		5,235	183,548	189,610
02643-1-	20" RS From IPS To Headworks														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	80.00 lf	31.00 /mh	620	-	-	-	-	-	-	-	-	620	868
	Trench Backfill 6- 8'	2333.020	80.00 lf	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Utility Bedding Stone 3/4"	2305.200	45.39 cy	-	-	34.00 /ton	2,469	-	-	-	-	-	-	2,469	2,469
	Spoils to Waste	2333.060	45.39 cy	31.00 /mh	141	-	-	-	-	-	-	-	-	141	197
	DI Pipe RJ - Class 350 10 (Ceramic Lined)	2511.401	30.00 lf	31.00 /mh	112	70.00 /lf	2,310	-	-	-	-	-	-	2,422	2,466
	DI Pipe RJ - Class 250 16 (Ceramic Lined)	2511.401	10.00 lf	31.00 /mh	50	124.00 /lf	1,364	-	-	-	-	-	-	1,414	1,433
	DI Pipe RJ - Class 250 20 (Ceramic Lined)	2511.401	40.00 lf	31.00 /mh	273	165.00 /lf	7,260	-	-	-	-	-	-	7,533	7,642
	DI RJ Compact 90 10 (Ceramic Lined)	2511.514	1.00 ea	31.00 /mh	124	1,345.00 /ea	1,345	-	-	-	-	-	-	1,469	1,519
	DI RJ Compact 90 20 (Ceramic Lined)	2511.514	2.00 ea	31.00 /mh	496	6,300.00 /ea	12,600	-	-	-	-	-	-	13,096	13,294
	DI RJ Compact Tee 10 (Ceramic Lined)	2511.524	1.00 ea	31.00 /mh	124	2,680.00 /ea	2,680	-	-	-	-	-	-	2,804	2,854
	DI RJ Compact Tee 20 (Ceramic Lined)	2511.524	1.00 ea	31.00 /mh	248	10,100.00 /ea	10,100	-	-	-	-	-	-	10,348	10,447
	DI RJ Compact Tee 16x10 (Ceramic Lined)	2511.524	2.00 ea	31.00 /mh	744	4,150.00 /ea	8,300	-	-	-	-	-	-	9,044	9,342
	DI RJ Compact Red 16x10 (Ceramic Lined)	2511.520	1.00 ea	31.00 /mh	372	3,260.00 /ea	3,260	-	-	-	-	-	-	3,632	3,781
	DI RJ Compact Red 20x16 (Ceramic Lined)	2511.520	1.00 ea	31.00 /mh	372	3,470.00 /ea	3,470	-	-	-	-	-	-	3,842	3,991
	DI RJ Compact Solid Sleeve Long 20 (Ceramic Lined)	2511.522	2.00 ea	31.00 /mh	496	3,890.00 /ea	7,780	-	-	-	-	-	-	8,276	8,474
	DI RJ Compact Solid Sleeve Short 10 (Ceramic Lined)	2511.523	4.00 ea	31.00 /mh	496	1,320.00 /ea	5,280	-	-	-	-	-	-	5,776	5,974
	Polybag 24" and smaller	2333.090	80.00 lf	31.00 /mh	25	1.40 /lf	123	-	-	-	-	-	-	148	158
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.30 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,550	3,500.00 /mnth	1,050	3,600	3,651
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,650	3,000.00 /mnth	900	2,550	2,583
	Water Truck, 4,000 Gallon (L)	1900.210	0.30 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,350	1,200.00 /mnth	360	1,710	1,737
	Mikasa Jumping Jack Compactor (L)	1900.138	0.30 mnth	-	-	-	-	-	-	200.00 /mnth	60	100.00 /mnth	30	90	91
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.30 mnth	-	-	-	-	-	-	2,000.00 /mnth	600	300.00 /mnth	90	690	702
	Warning Tape Detectable	2333.080	80.00 lf	31.00 /mh	25	0.07 /lf	6	-	-	-	-	-	-	30	40
	Tracer Wire	2333.080	100.00 lf	31.00 /mh	31	0.25 /lf	28	-	-	-	-	-	-	59	71
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	4.00 cy	31.00 /mh	496	165.00 /cy	693	-	-	-	-	-	-	1,189	1,387
	DI Pipe 20in. dia FxPE - 4ft. 0in. (Cermamic Lined)	15221.030	1.00 ea	31.00 /mh	124	3,200.00 /ea	3,200	-	-	-	-	-	-	3,324	3,374
	DI Flanged Con Red 20x06" (Ceramic Lined)	15221.445	1.00 ea	31.00 /mh	186	6,500.00 /ea	6,500	-	-	-	-	-	-	6,686	6,760
	Valve Plug Flange 125# 6in w/ handwheel	15110.650	1.00 ea	31.00 /mh	124	1,280.00 /ea	1,280	-	-	-	-	-	-	1,404	1,454
	Camlock Cap SS 6"	15220.600	1.00 ea	31.00 /mh	62	320.00 /ea	320	-	-	-	-	-	-	382	407
	Camlock Adapter SS Female x Flange 6"	15220.600	1.00 ea	31.00 /mh	62	500.00 /ea	500	-	-	-	-	-	-	562	587
	NBG Kit 125# SS 20in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	1,200.00 /ea	1,200	-	-	-	-	-	-	1,231	1,243
	NBG Kit 125# Insulating 6in	15125.016	1.00 ea	31.00 /mh	31	60.00 /ea	60	-	-	-	-	-	-	91	103
	NBG Kit 125# SS 6in [316SS & 1/8" EPDM]	15125.012	2.00 ea	31.00 /mh	62	350.00 /ea	700	-	-	-	-	-	-	762	787
	20" RS From IPS To Headworks		110.00 lf		7,165		83,068	/lf			6,260		2,430	98,923	101,914
02643-1-	6" RAW SEWAGE HEADWORKS														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	140.00 lf	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Trench Backfill 6- 8'	2333.020	140.00 lf	31.00 /mh	1,302	-	-	-	-	-	-	-	-	1,302	1,823
	Utility Bedding Peastone	2305.200	38.89 cy	-	-	24.00 /ton	1,493	-	-	-	-	-	-	1,493	1,493
	Spoils to Waste	2333.060	38.89 cy	31.00 /mh	121	-	-	-	-	-	-	-	-	121	169

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02643-1- 6" RAW SEWAGE HEADWORKS															
	DI Pipe RJ - Class 50 6 (Ceramic Lined)	2511.401	140.00 lf	31.00 /mh	434	43.00 /lf	6,622	-	-	-	-	-	-	7,056	7,230
	DI RJ Compact 90 6 (Ceramic Lined)	2511.514	1.00 ea	31.00 /mh	62	685.00 /ea	685	-	-	-	-	-	-	747	772
	DI RJ Compact 45 6 (Ceramic Lined)	2511.514	1.00 ea	31.00 /mh	62	660.00 /ea	660	-	-	-	-	-	-	722	747
	DI RJ Compact Tee 6 (Ceramic Lined)	2511.524	1.00 ea	31.00 /mh	93	1,300.00 /ea	1,300	-	-	-	-	-	-	1,393	1,430
	DI RJ Compact Wye 6 (Ceramic Lined)	2511.528	1.00 ea	31.00 /mh	93	1,540.00 /ea	1,540	-	-	-	-	-	-	1,633	1,670
	DI RJ Compact Solid Sleeve Short 6 (Ceramic Lined)	2511.523	1.00 ea	31.00 /mh	93	780.00 /ea	780	-	-	-	-	-	-	873	910
	Polybag 12" and Smaller	2333.090	160.00 lf	31.00 /mh	50	0.75 /lf	132	-	-	-	-	-	-	182	201
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.22 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,870	3,500.00 /mnth	770	2,640	2,677
	John Deere 624 Loader (172 HP) (M)	1900.132	0.22 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,210	3,000.00 /mnth	660	1,870	1,894
	Water Truck, 4,000 Gallon (L)	1900.210	0.22 mnth	-	-	-	-	-	-	4,500.00 /mnth	990	1,200.00 /mnth	264	1,254	1,274
	Mikasa Jumping Jack Compactor (L)	1900.138	0.22 mnth	-	-	-	-	-	-	200.00 /mnth	44	100.00 /mnth	22	66	67
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.22 mnth	-	-	-	-	-	-	2,000.00 /mnth	440	300.00 /mnth	66	506	515
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cross Existing	2333.010	3.00 ea	31.00 /mh	186	100.00 /ea	300	-	-	-	-	-	-	486	560
	3500 psi Thrust Block Concrete	3310.105	2.00 cy	31.00 /mh	248	165.00 /cy	347	-	-	-	-	-	-	595	694
	Conc Pad for Valve Box	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	DI Pipe 6in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	900.00 /ea	900	-	-	-	-	-	-	1,024	1,074
	DI Blind Flange 6"	15221.405	1.00 ea	31.00 /mh	62	130.00 /ea	130	-	-	-	-	-	-	192	217
	NBG Kit 125# SS 6in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	350.00 /ea	350	-	-	-	-	-	-	381	393
	DI RJ Compact Cap 6	2511.510	2.00 ea	31.00 /mh	124	200.00 /ea	400	-	-	-	-	-	-	524	574
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	6" RAW SEWAGE HEADWORKS		140.00 lf		4,820		15,864	/lf			4,604		1,782	27,070	29,090
	CELDI Ceramic Epoxy Lined DI				36,306		315,686		8,000		37,014		12,930	409,935	425,198
CML Ductile Iron															
02643-1- 4" SSM SCUM CLARIFIERS															
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 6- 8'	2333.010	80.00 lf	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Trench Backfill 6- 8'	2333.020	80.00 lf	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Utility Bedding Peastone	2305.200	22.22 cy	-	-	24.00 /ton	853	-	-	-	-	-	-	853	853
	Spoils to Waste	2333.060	22.22 cy	31.00 /mh	69	-	-	-	-	-	-	-	-	69	96
	DI Pipe RJ - Class 50 4 [all pipe/ftg is CML per spec, Ceramic as Noted]	2511.401	80.00 lf	31.00 /mh	248	35.00 /lf	3,080	-	-	-	-	-	-	3,328	3,427
	DI RJ Compact 45 4	2511.514	6.00 ea	31.00 /mh	372	280.00 /ea	1,680	-	-	-	-	-	-	2,052	2,201
	DI RJ Compact Wye 4	2511.528	2.00 ea	31.00 /mh	124	506.00 /ea	1,012	-	-	-	-	-	-	1,136	1,186
	DI RJ Compact Solid Sleeve Short 4	2511.523	6.00 ea	31.00 /mh	372	290.00 /ea	1,740	-	-	-	-	-	-	2,112	2,261
	Polybag 12" and Smaller	2333.090	100.00 lf	31.00 /mh	31	0.75 /lf	83	-	-	-	-	-	-	114	126
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Warning Tape Detectable	2333.080	80.00 lf	31.00 /mh	25	0.07 /lf	6	-	-	-	-	-	-	30	40
	3500 psi Thrust Block Concrete	3310.105	2.00 cy	31.00 /mh	248	165.00 /cy	347	-	-	-	-	-	-	595	694
	Conc Pad for Valve Box	2519.100	2.00 ea	31.00 /mh	248	50.00 /ea	100	-	-	-	-	-	-	348	447
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	248	750.00 /ea	1,500	-	-	-	-	-	-	1,748	1,847
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	124	75.00 /ea	150	-	-	-	-	-	-	274	324
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	2.00 ea	31.00 /mh	62	300.00 /ea	600	-	-	-	-	-	-	662	687
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	2.00 ea	31.00 /mh	248	125.00 /ea	250	-	-	-	-	-	-	498	597
	4" SSM SCUM CLARIFIERS		80.00 lf		4,155		11,500	/lf			3,619		1,377	20,651	22,385
	CML Ductile Iron				4,155		11,500				3,619		1,377	20,651	22,385
GAS HDPE															
02616- NATURAL GAS TRENCH															
	Trench Excavtion 0- 4'	2333.010	440.00 lf	31.00 /mh	2,046	-	-	-	-	-	-	-	-	2,046	2,864
	Trench Backfill 0- 4'	2333.020	440.00 lf	31.00 /mh	2,728	-	-	-	-	-	-	-	-	2,728	3,819
	Utility Bedding Peastone	2305.200	32.59 cy	-	-	24.00 /ton	1,252	-	-	-	-	-	-	1,252	1,252
	Spoils to Waste	2333.060	32.59 cy	31.00 /mh	101	-	-	-	-	-	-	-	-	101	141
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.20 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,700	3,500.00 /mnth	700	2,400	2,434
	John Deere 624 Loader (172 HP) (M)	1900.132	0.20 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,100	3,000.00 /mnth	600	1,700	1,722
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 mnth	-	-	-	-	-	-	4,500.00 /mnth	450	1,200.00 /mnth	120	570	579
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 mnth	-	-	-	-	-	-	200.00 /mnth	20	100.00 /mnth	10	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 mnth	-	-	-	-	-	-	2,000.00 /mnth	200	300.00 /mnth	30	230	234
	Pot Hole Existing	2333.010	8.00 ea	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	Gas Pipe Sub (exterior)	15402.010	1.00 ls	-	-	-	-	14,000.00 /ls	14,000	-	-	-	-	14,000	14,000
	Valve Box Assembly 6' Bury	2519.130	12.00 ea	31.00 /mh	1,116	350.00 /ea	4,200	-	-	-	-	-	-	5,316	5,762
	Conc Pad for Valve Box	2519.100	12.00 ea	31.00 /mh	744	50.00 /ea	600	-	-	-	-	-	-	1,344	1,642
	NATURAL GAS TRENCH		440.00 lf		8,719		6,052	31.82 /lf	14,000		3,470		1,460	33,701	37,258
	GAS HDPE				8,719		6,052		14,000		3,470		1,460	33,701	37,258
HDPE HDPE															
02616- 3" GLYCERINE GLY															

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02616- 3" GLYCERINE GLY														
	Testing Pressure & Leak - Piping	1166.100	6.00 ea	31.00 /mh	1,488	50.00 /ea	300	-	-	50.00 /ea	300	-	-	2,088	2,689
	Trench Excavtion 0- 4'	2333.010	480.00 lf	31.00 /mh	1,786	-	-	-	-	-	-	-	-	1,786	2,500
	Trench Backfill 0- 4'	2333.020	480.00 lf	31.00 /mh	2,678	-	-	-	-	-	-	-	-	2,678	3,750
	Utility Bedding Peastone	2305.200	88.89 cy	-	-	24.00 /ton	3,413	-	-	-	-	-	-	3,413	3,413
	Spoils to Waste	2333.060	88.89 cy	31.00 /mh	276	-	-	-	-	-	-	-	-	276	386
	HD PE Pipe 3 DR 13.5 PE 4710	2631.301	480.00 lf	31.00 /mh	744	4.00 /lf	2,016	-	-	-	-	-	-	2,760	3,058
	HD PE 90 bend 3 DR 17 Long Sweep	2631.314	6.00 ea	31.00 /mh	372	75.00 /ea	450	-	-	-	-	-	-	822	971
	HD PE 45 bend 12 DR 17 Long Sweep	2631.314	6.00 ea	31.00 /mh	372	75.00 /ea	450	-	-	-	-	-	-	822	971
	HD PE Pipe Cap 12 DR 17	2631.350	6.00 ea	31.00 /mh	372	15.00 /ea	90	-	-	-	-	-	-	462	611
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.52 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,420	3,500.00 /mnth	1,820	6,240	6,328
	John Deere 624 Loader (172 HP) (M)	1900.132	0.52 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,860	3,000.00 /mnth	1,560	4,420	4,477
	Water Truck, 4,000 Gallon (L)	1900.210	0.52 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,340	1,200.00 /mnth	624	2,964	3,011
	Mikasa Jumping Jack Compactor (L)	1900.138	0.52 mnth	-	-	-	-	-	-	200.00 /mnth	104	100.00 /mnth	52	156	158
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.52 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,040	300.00 /mnth	156	1,196	1,217
	Pot Hole Existing	2333.010	5.00 ea	31.00 /mh	620	-	-	-	-	-	-	-	-	620	868
	Cross Existing	2333.010	5.00 ea	31.00 /mh	310	100.00 /ea	500	-	-	-	-	-	-	810	934
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Warning Tape Detectable	2333.080	480.00 lf	31.00 /mh	149	0.07 /lf	34	-	-	-	-	-	-	182	242
	Tracer Wire	2333.080	500.00 lf	31.00 /mh	155	0.25 /lf	138	-	-	-	-	-	-	293	355
	Tracer Wire Test Box	2333.080	3.00 ea	31.00 /mh	372	95.00 /ea	285	-	-	-	-	-	-	657	806
	HD PE Tee 3 DR 17	2631.320	1.00 ea	31.00 /mh	93	15.00 /ea	15	-	-	-	-	-	-	108	145
	PVC Reinf Tubing 3/4" ID x 1" OD	15219.100	500.00 lf	31.00 /mh	1,550	2.00 /lf	1,150	-	-	-	-	-	-	2,700	3,320
	3" GLYCERINE GLY		480.00 lf		11,460		8,890	/lf			11,064		4,212	35,627	40,432
	02616- 3" FERRIC CHLORIDE FC														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 4- 6'	2333.010	220.00 lf	31.00 /mh	682	-	-	-	-	-	-	-	-	682	955
	Trench Backfill 4- 6'	2333.020	220.00 lf	31.00 /mh	1,023	-	-	-	-	-	-	-	-	1,023	1,432
	Utility Bedding Peastone	2305.200	40.74 cy	-	-	24.00 /ton	1,564	-	-	-	-	-	-	1,564	1,564
	Spoils to Waste	2333.060	40.74 cy	31.00 /mh	126	-	-	-	-	-	-	-	-	126	177
	HD PE Pipe 3 DR 13.5 PE 4710	2631.301	220.00 lf	31.00 /mh	341	4.00 /lf	924	-	-	-	-	-	-	1,265	1,401
	HD PE 90 bend 3 DR 17	2631.314	4.00 ea	31.00 /mh	248	75.00 /ea	300	-	-	-	-	-	-	548	647
	HD PE 45 bend 12 DR 17	2631.314	4.00 ea	31.00 /mh	248	75.00 /ea	300	-	-	-	-	-	-	548	647
	HD PE Pipe Cap 12 DR 17	2631.350	4.00 ea	31.00 /mh	248	15.00 /ea	60	-	-	-	-	-	-	308	407
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.21 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,785	3,500.00 /mnth	735	2,520	2,556
	John Deere 624 Loader (172 HP) (M)	1900.132	0.21 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,155	3,000.00 /mnth	630	1,785	1,808
	Water Truck, 4,000 Gallon (L)	1900.210	0.21 mnth	-	-	-	-	-	-	4,500.00 /mnth	945	1,200.00 /mnth	252	1,197	1,216
	Mikasa Jumping Jack Compactor (L)	1900.138	0.21 mnth	-	-	-	-	-	-	200.00 /mnth	42	100.00 /mnth	21	63	64
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.21 mnth	-	-	-	-	-	-	2,000.00 /mnth	420	300.00 /mnth	63	483	491
	Warning Tape Detectable	2333.080	220.00 lf	31.00 /mh	68	0.07 /lf	15	-	-	-	-	-	-	84	111
	Tracer Wire	2333.080	240.00 lf	31.00 /mh	74	0.25 /lf	66	-	-	-	-	-	-	140	170
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	PVC Reinf Tubing 3/4" ID x 1" OD	15219.100	240.00 lf	31.00 /mh	744	2.00 /lf	552	-	-	-	-	-	-	1,296	1,594
	Manhole 4'	2327.010	1.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	3" FERRIC CHLORIDE FC		220.00 lf		5,043		4,072	/lf			4,447		1,701	15,263	17,369
	HDPE HDPE				16,503		12,962				15,511		5,913	50,890	57,801
	PVC C900														
	02605- 16" ML From Splitter to Clarifier 6														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 14-16'	2333.010	198.00 lf	31.00 /mh	1,228	-	-	-	-	-	-	-	-	1,228	1,719
	Trench Backfill 14-16'	2333.020	198.00 lf	31.00 /mh	1,841	-	-	-	-	-	-	-	-	1,841	2,578
	Trench Box 16' Deep	2333.030	60.00 lf	31.00 /mh	-	-	-	-	-	32.00 /lf	1,920	-	-	1,920	1,958
	Utility Bedding Stone 3/4"	2305.200	89.83 cy	-	-	34.00 /ton	4,887	-	-	-	-	-	-	4,887	4,887
	Spoils to Waste	2333.060	89.83 cy	31.00 /mh	278	-	-	-	-	-	-	-	-	278	390
	PVC C-900 Pipe 16	2336.310	170.00 lf	31.00 /mh	843	66.00 /lf	12,342	-	-	-	-	-	-	13,185	13,522
	DI RJ Compact 90 16	2511.514	4.00 ea	31.00 /mh	496	2,080.00 /ea	8,320	-	-	-	-	-	-	8,816	9,014
	DI RJ Compact 45 16	2511.514	3.00 ea	31.00 /mh	372	1,800.00 /ea	5,400	-	-	-	-	-	-	5,772	5,921
	DI RJ Compact 11-¼ 16	2511.514	2.00 ea	31.00 /mh	248	1,760.00 /ea	3,520	-	-	-	-	-	-	3,768	3,867
	DI RJ Compact Cap 16	2511.510	2.00 ea	31.00 /mh	186	920.00 /ea	1,840	-	-	-	-	-	-	2,026	2,100
	DI RJ Compact Solid Sleeve Short 16	2511.523	4.00 ea	31.00 /mh	744	1,700.00 /ea	6,800	-	-	-	-	-	-	7,544	7,842
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.43 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,655	3,500.00 /mnth	1,505	5,160	5,233
	John Deere 624 Loader (172 HP) (M)	1900.132	0.43 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,365	3,000.00 /mnth	1,290	3,655	3,702
	Water Truck, 4,000 Gallon (L)	1900.210	0.43 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,935	1,200.00 /mnth	516	2,451	2,490
	Mikasa Jumping Jack Compactor (L)	1900.138	0.43 mnth	-	-	-	-	-	-	200.00 /mnth	86	100.00 /mnth	43	129	131
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.43 mnth	-	-	-	-	-	-	2,000.00 /mnth	860	300.00 /mnth	129	989	1,006
	Warning Tape Detectable	2333.080	200.00 lf	31.00 /mh	62	0.07 /lf	14	-	-	-	-	-	-	76	101
	Tracer Wire	2333.080	200.00 lf	31.00 /mh	62	0.25 /lf	55	-	-	-	-	-	-	117	142
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	3500 psi Thrust Block Concrete	3310.105	7.00 cy	31.00 /mh	868	165.00 /cy	1,213	-	-	-	-	-	-	2,081	2,428

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-	16" ML From Splitter to Clarifier 6														
	DI Pipe RJ - Class 250 16	2511.401	40.00 lf	31.00 /mh	198	90.00 /lf	3,960	-	-	-	-	-	-	4,158	4,238
	DI Floor Pipe FLG x PE w/ Collar 16in x 4ft 0in long	15221.236	1.00 ea	31.00 /mh	124	2,400.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	DI Floor Pipe FLG x PE w/ Collar 16in x 6ft 0in long	15221.236	1.00 ea	31.00 /mh	124	2,800.00 /ea	2,800	-	-	-	-	-	-	2,924	2,974
	Polybag 18" and smaller	2333.090	30.00 lf	31.00 /mh	9	1.40 /lf	46	-	-	-	-	-	-	56	59
	Poly Tape	2333.090	1.00 roll	31.00 /mh		5.00 /roll	6	-	-	-	-	-	-	6	6
	Dewatering	2240.050	1.00 ls	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Trench Stabilization Rock	2305.050	20.00 cy	-	-	36.00 /ton	1,166	-	-	-	-	-	-	1,166	1,166
	16 Bell Restrainer F/C900	2336.380	8.00 ea	31.00 /mh	496	433.00 /ea	3,464	-	-	-	-	-	-	3,960	4,158
	16" ML From Splitter to Clarifier 6		198.00 lf		9,482		58,523	/lf			10,921		3,483	82,409	86,421
02605-	14" ABI From Headworks to Anoxic														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 6- 8'	2333.010	100.00 lf	31.00 /mh	465	-	-	-	-	-	-	-	-	465	651
	Trench Backfill 6- 8'	2333.020	100.00 lf	31.00 /mh	775	-	-	-	-	-	-	-	-	775	1,085
	Utility Bedding Stone 3/4"	2305.200	37.22 cy	-	-	34.00 /ton	2,025	-	-	-	-	-	-	2,025	2,025
	Spoils to Waste	2333.060	37.22 cy	31.00 /mh	115	-	-	-	-	-	-	-	-	115	162
	PVC C-900 Pipe 14	2336.310	80.00 lf	31.00 /mh	372	51.00 /lf	4,488	-	-	-	-	-	-	4,860	5,009
	DI RJ Compact 90 14	2511.514	2.00 ea	31.00 /mh	186	1,660.00 /ea	3,320	-	-	-	-	-	-	3,506	3,580
	DI RJ Compact 45 14	2511.514	1.00 ea	31.00 /mh	93	1,440.00 /ea	1,440	-	-	-	-	-	-	1,533	1,570
	DI RJ Compact Cap 14	2511.510	2.00 ea	31.00 /mh	186	710.00 /ea	1,420	-	-	-	-	-	-	1,606	1,680
	DI RJ Compact Solid Sleeve Short 14	2511.523	4.00 ea	31.00 /mh	372	1,480.00 /ea	5,920	-	-	-	-	-	-	6,292	6,441
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Warning Tape Detectable	2333.080	80.00 lf	31.00 /mh	25	0.07 /lf	6	-	-	-	-	-	-	30	40
	Tracer Wire	2333.080	100.00 lf	31.00 /mh	31	0.25 /lf	28	-	-	-	-	-	-	59	71
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	2.50 cy	31.00 /mh	310	165.00 /cy	433	-	-	-	-	-	-	743	867
	Polybag 18" and smaller	2333.090	10.00 lf	31.00 /mh	3	1.40 /lf	15	-	-	-	-	-	-	19	20
	DI Pipe RJ - Class 250 14	2511.401	23.00 lf	31.00 /mh	107	80.00 /lf	2,024	-	-	-	-	-	-	2,131	2,174
	DI Floor Pipe PE x PE w/ Collar 14in x 6ft 0in long	15221.248	1.00 ea	31.00 /mh	93	1,400.00 /ea	1,400	-	-	-	-	-	-	1,493	1,530
	14 Bell Restrainer F/C900	2336.380	3.00 ea	31.00 /mh	186	385.00 /ea	1,155	-	-	-	-	-	-	1,341	1,415
	14" ABI From Headworks to Anoxic		100.00 lf		4,063		23,963	/lf			3,619		1,377	33,023	34,720
02605-	14" ABI From Headworks to Aerobic														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 8-10'	2333.010	76.00 lf	31.00 /mh	471	-	-	-	-	-	-	-	-	471	660
	Trench Backfill 8-10'	2333.020	76.00 lf	31.00 /mh	589	-	-	-	-	-	-	-	-	589	825
	Utility Bedding Stone 3/4"	2305.200	28.29 cy	-	-	34.00 /ton	1,539	-	-	-	-	-	-	1,539	1,539
	Spoils to Waste	2333.060	28.29 cy	31.00 /mh	88	-	-	-	-	-	-	-	-	88	123
	PVC C-900 Pipe 14	2336.310	66.00 lf	31.00 /mh	307	51.00 /lf	3,703	-	-	-	-	-	-	4,010	4,132
	DI RJ Compact 90 14	2511.514	3.00 ea	31.00 /mh	279	1,660.00 /ea	4,980	-	-	-	-	-	-	5,259	5,371
	DI RJ Compact 45 14	2511.514	1.00 ea	31.00 /mh	93	1,440.00 /ea	1,440	-	-	-	-	-	-	1,533	1,570
	DI RJ Compact Solid Sleeve Short 14	2511.523	4.00 ea	31.00 /mh	372	1,480.00 /ea	5,920	-	-	-	-	-	-	6,292	6,441
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Warning Tape Detectable	2333.080	76.00 lf	31.00 /mh	24	0.07 /lf	5	-	-	-	-	-	-	29	38
	Tracer Wire	2333.080	90.00 lf	31.00 /mh	28	0.25 /lf	25	-	-	-	-	-	-	53	64
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	31.00 /mh	372	165.00 /cy	520	-	-	-	-	-	-	892	1,041
	Polybag 18" and smaller	2333.090	20.00 lf	31.00 /mh	6	1.40 /lf	31	-	-	-	-	-	-	37	39
	Poly Tape	2333.090	1.00 roll	31.00 /mh		5.00 /roll	6	-	-	-	-	-	-	6	6
	DI Pipe RJ - Class 250 14	2511.401	13.00 lf	31.00 /mh	60	80.00 /lf	1,144	-	-	-	-	-	-	1,204	1,229
	DI Floor Pipe PE x PE w/ Collar 14in x 6ft 0in long	15221.248	1.00 ea	31.00 /mh	93	1,400.00 /ea	1,400	-	-	-	-	-	-	1,493	1,530
	Sleeve w/Ring 316SS 18" x 1'-10"	15121.250	1.00 ea	31.00 /mh	124	2,300.00 /ea	2,300	-	-	-	-	-	-	2,424	2,474
	Link Seal Size LS-360-S-316ss	15123.100	48.00 ea	31.00 /mh	223	15.00 /ea	720	-	-	-	-	-	-	943	1,032
	14 Bell Restrainer F/C900	2336.380	2.00 ea	31.00 /mh	124	385.00 /ea	770	-	-	-	-	-	-	894	944
	14" ABI From Headworks to Aerobic		76.00 lf		3,997		24,791	/lf			3,619		1,377	33,785	35,456
02605-	10" RAS From Process Bld. to Anaerobic														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 8-10'	2333.010	140.00 lf	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Trench Backfill 8-10'	2333.020	140.00 lf	31.00 /mh	1,085	-	-	-	-	-	-	-	-	1,085	1,519
	Utility Bedding Peastone	2305.200	44.02 cy	-	-	24.00 /ton	1,690	-	-	-	-	-	-	1,690	1,690

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-	10" RAS From Process Bld. to Anaerobic														
	Spoils to Waste	2333.060	44.02 cy	31.00 /mh	136	-	-	-	-	-	-	-	-	136	191
	PVC C-900 Pipe 10	2336.310	140.00 lf	31.00 /mh	521	33.00 /lf	5,082	-	-	-	-	-	-	5,603	5,811
	DI RJ Compact 90 10	2511.514	3.00 ea	31.00 /mh	279	820.00 /ea	2,460	-	-	-	-	-	-	2,739	2,851
	DI RJ Compact 45 4	2511.514	1.00 ea	31.00 /mh	62	280.00 /ea	280	-	-	-	-	-	-	342	367
	DI RJ Compact Wye 10x4	2511.528	1.00 ea	31.00 /mh	93	1,070.00 /ea	1,070	-	-	-	-	-	-	1,163	1,200
	DI RJ Compact Solid Sleeve Short 10	2511.523	4.00 ea	31.00 /mh	372	780.00 /ea	3,120	-	-	-	-	-	-	3,492	3,641
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.21 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,785	3,500.00 /mnth	735	2,520	2,556
	John Deere 624 Loader (172 HP) (M)	1900.132	0.21 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,155	3,000.00 /mnth	630	1,785	1,808
	Water Truck, 4,000 Gallon (L)	1900.210	0.21 mnth	-	-	-	-	-	-	4,500.00 /mnth	945	1,200.00 /mnth	252	1,197	1,216
	Mikasa Jumping Jack Compactor (L)	1900.138	0.21 mnth	-	-	-	-	-	-	200.00 /mnth	42	100.00 /mnth	21	63	64
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.21 mnth	-	-	-	-	-	-	2,000.00 /mnth	420	300.00 /mnth	63	483	491
	Warning Tape Detectable	2333.080	140.00 lf	31.00 /mh	43	0.07 /lf	10	-	-	-	-	-	-	53	71
	Tracer Wire	2333.080	160.00 lf	31.00 /mh	50	0.25 /lf	44	-	-	-	-	-	-	94	113
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	31.00 /mh	372	165.00 /cy	520	-	-	-	-	-	-	892	1,041
	10 Bell Restrainer F/C900	2336.380	6.00 ea	31.00 /mh	93	225.00 /ea	1,350	-	-	-	-	-	-	1,443	1,480
	Polybag 12" and Smaller	2333.090	40.00 lf	31.00 /mh	12	0.75 /lf	33	-	-	-	-	-	-	45	50
	Poly Tape	2333.090	2.00 roll	31.00 /mh		5.00 /ro ll	11	-	-	-	-	-	-	11	11
	DI Pipe 4in. dia FxPE - 8ft. 0in.	15221.030	1.00 ea	31.00 /mh	93	750.00 /ea	750	-	-	-	-	-	-	843	880
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI Pipe 10in. dia PEXPE - 5ft. 0in.	15221.070	1.00 ea	31.00 /mh	62	600.00 /ea	600	-	-	-	-	-	-	662	687
	Sleeve w/Ring 316SS 14" x 1'-10"	15121.250	1.00 ea	31.00 /mh	62	1,700.00 /ea	1,700	-	-	-	-	-	-	1,762	1,787
	Link Seal Size LS-400-S	15123.100	20.00 ea	31.00 /mh	93	16.00 /ea	320	-	-	-	-	-	-	413	450
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	Conc Pad for Cleanout	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	10 Bell Restrainer F/C900	2336.380	6.00 ea	31.00 /mh	186	225.00 /ea	1,350	-	-	-	-	-	-	1,536	1,610
	10" RAS From Process Bld. to Anaerobic		140.00 lf		5,103		21,180	/lf			4,397		1,701	32,381	34,510
02605-	8" RAS From Clarifier 5 to Process Bld.														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 14-16'	2333.010	72.00 lf	31.00 /mh	513	-	-	-	-	-	-	-	-	513	719
	Trench Backfill 14-16'	2333.020	72.00 lf	31.00 /mh	714	-	-	-	-	-	-	-	-	714	1,000
	Utility Bedding Peastone	2305.200	21.36 cy	-	-	24.00 /to n	820	-	-	-	-	-	-	820	820
	Spoils to Waste	2333.060	21.36 cy	31.00 /mh	66	-	-	-	-	-	-	-	-	66	93
	PVC C-900 Pipe 8	2336.310	40.00 lf	31.00 /mh	136	22.00 /lf	968	-	-	-	-	-	-	1,104	1,159
	DI RJ Compact 90 8	2511.514	1.00 ea	31.00 /mh	62	510.00 /ea	510	-	-	-	-	-	-	572	597
	DI RJ Compact 45 4	2511.514	1.00 ea	31.00 /mh	62	280.00 /ea	280	-	-	-	-	-	-	342	367
	DI RJ Compact 45 8	2511.514	2.00 ea	31.00 /mh	124	470.00 /ea	940	-	-	-	-	-	-	1,064	1,114
	DI RJ Compact Wye 8x4	2511.528	1.00 ea	31.00 /mh	93	780.00 /ea	780	-	-	-	-	-	-	873	910
	DI RJ Compact Cap 8	2511.510	2.00 ea	31.00 /mh	62	245.00 /ea	490	-	-	-	-	-	-	552	577
	DI RJ Compact Solid Sleeve Short 8	2511.523	4.00 ea	31.00 /mh	248	520.00 /ea	2,080	-	-	-	-	-	-	2,328	2,427
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Warning Tape Detectable	2333.080	72.00 lf	31.00 /mh	22	0.07 /lf	5	-	-	-	-	-	-	27	36
	Tracer Wire	2333.080	70.00 lf	31.00 /mh	22	0.25 /lf	19	-	-	-	-	-	-	41	50
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	31.00 /mh	372	165.00 /cy	520	-	-	-	-	-	-	892	1,041
	DI Pipe 4in. dia FxPE - 12ft. 0in.	15221.030	1.00 ea	31.00 /mh	62	900.00 /ea	900	-	-	-	-	-	-	962	987
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI Pipe RJ - Class 350 8	2511.401	32.00 lf	31.00 /mh	109	37.00 /lf	1,302	-	-	-	-	-	-	1,412	1,455
	DI Floor Pipe PE x PE w/ Collar 8in x 4ft 0in long	15221.248	1.00 ea	31.00 /mh	62	550.00 /ea	550	-	-	-	-	-	-	612	637
	Polybag 12" and Smaller	2333.090	20.00 lf	31.00 /mh	6	0.75 /lf	17	-	-	-	-	-	-	23	25
	Poly Tape	2333.090	1.00 roll	31.00 /mh		5.00 /ro ll	6	-	-	-	-	-	-	6	6
	8 Bell Restrainer F/C900	2336.380	2.00 ea	31.00 /mh	62	138.00 /ea	276	-	-	-	-	-	-	338	363
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	Conc Pad for Cleanout	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	Dewatering	2240.050	1.00 ls	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Trench Stabilization Rock	2305.050	15.00 cy	-	-	36.00 /to n	875	-	-	-	-	-	-	875	875
	8" RAS From Clarifier 5 to Process Bld.		72.00 lf		4,225		12,177	/lf			3,619		1,377	21,398	23,160
02605-	8" RAS From Clarifier 6 to Process Bld.														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 14-16'	2333.010	76.00 lf	31.00 /mh	542	-	-	-	-	-	-	-	-	542	759
	Trench Backfill 14-16'	2333.020	76.00 lf	31.00 /mh	754	-	-	-	-	-	-	-	-	754	1,056
	Trench Box 16' Deep	2333.030	76.00 lf	31.00 /mh	0	-	-	-	-	32.00 /lf	2,432	-	-	2,432	2,481

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-	8" RAS From Clarifier 6 to Process Bld.														
	Utility Bedding Peastone	2305.200	18.32 cy	-	-	24.00 /ton	704	-	-	-	-	-	-	704	704
	Spoils to Waste	2333.060	18.32 cy	31.00 /mh	57	-	-	-	-	-	-	-	-	57	80
	PVC C-900 Pipe 8	2336.310	44.00 lf	31.00 /mh	150	22.00 /lf	1,065	-	-	-	-	-	-	1,215	1,275
	DI RJ Compact 90 8	2511.514	1.00 ea	31.00 /mh	62	510.00 /ea	510	-	-	-	-	-	-	572	597
	DI RJ Compact 45 4	2511.514	1.00 ea	31.00 /mh	31	280.00 /ea	280	-	-	-	-	-	-	311	323
	DI RJ Compact 45 8	2511.514	2.00 ea	31.00 /mh	124	470.00 /ea	940	-	-	-	-	-	-	1,064	1,114
	DI RJ Compact Wye 8x4	2511.528	1.00 ea	31.00 /mh	93	780.00 /ea	780	-	-	-	-	-	-	873	910
	DI RJ Compact Solid Sleeve Short 8	2511.523	4.00 ea	31.00 /mh	248	520.00 /ea	2,080	-	-	-	-	-	-	2,328	2,427
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Warning Tape Detectable	2333.080	52.00 lf	31.00 /mh	16	0.07 /lf	4	-	-	-	-	-	-	20	26
	Tracer Wire	2333.080	80.00 lf	31.00 /mh	25	0.25 /lf	22	-	-	-	-	-	-	47	57
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	31.00 /mh	372	165.00 /cy	520	-	-	-	-	-	-	892	1,041
	DI Pipe 4in. dia FxPE - 12ft. 0in.	15221.030	1.00 ea	31.00 /mh	62	900.00 /ea	900	-	-	-	-	-	-	962	987
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI Pipe RJ - Class 350 8	2511.401	32.00 lf	31.00 /mh	109	37.00 /lf	1,302	-	-	-	-	-	-	1,412	1,455
	DI Floor Pipe PE x PE w/ Collar 8in x 4ft 0in long	15221.248	1.00 ea	31.00 /mh	62	550.00 /ea	550	-	-	-	-	-	-	612	637
	Polybag 12" and Smaller	2333.090	20.00 lf	31.00 /mh	6	0.75 /lf	17	-	-	-	-	-	-	23	25
	Poly Tape	2333.090	1.00 roll	31.00 /mh	-	5.00 /roll	6	-	-	-	-	-	-	6	6
	8 Bell Restrainer F/C900	2336.380	2.00 ea	31.00 /mh	62	138.00 /ea	276	-	-	-	-	-	-	338	363
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	Conc Pad for Cleanout	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	Dewatering	2240.050	1.00 ls	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Trench Stabilization Rock	2305.050	15.00 cy	-	-	36.00 /ton	875	-	-	-	-	-	-	875	875
	8" RAS From Clarifier 6 to Process Bld.		76.00 lf		4,201		11,669	/lf			6,051		1,377	23,298	25,099
02605-	24" SE From Clarifiers to UV														
	Trench Excavtion 8-10'	2333.010	414.00 lf	31.00 /mh	2,567	-	-	-	-	-	-	-	-	2,567	3,594
	Trench Backfill 8-10'	2333.020	414.00 lf	31.00 /mh	3,209	-	-	-	-	-	-	-	-	3,209	4,492
	Trench Box 10' Deep	2333.030	240.00 lf	31.00 /mh	-	-	-	-	-	32.00 /lf	7,680	-	-	7,680	7,834
	Utility Bedding Stone 3/4"	2305.200	224.59 cy	-	-	34.00 /ton	12,218	-	-	-	-	-	-	12,218	12,218
	Spoils to Waste	2333.060	224.59 cy	31.00 /mh	696	-	-	-	-	-	-	-	-	696	975
	PVC C-900 Pipe 14	2336.310	80.00 lf	31.00 /mh	372	51.00 /lf	4,488	-	-	-	-	-	-	4,860	5,009
	PVC C-900 Pipe 24	2336.310	334.00 lf	31.00 /mh	2,589	147.00 /lf	54,008	-	-	-	-	-	-	56,596	57,632
	DI RJ Compact 90 14	2511.514	1.00 ea	31.00 /mh	93	1,660.00 /ea	1,660	-	-	-	-	-	-	1,753	1,790
	DI RJ Compact 45 24	2511.514	2.00 ea	31.00 /mh	372	3,600.00 /ea	7,200	-	-	-	-	-	-	7,572	7,721
	DI RJ Compact Tee 24x14	2511.524	1.00 ea	31.00 /mh	155	5,180.00 /ea	5,180	-	-	-	-	-	-	5,335	5,397
	DI RJ Compact Red 24x14	2511.520	1.00 ea	31.00 /mh	155	2,825.00 /ea	2,825	-	-	-	-	-	-	2,980	3,042
	DI RJ Compact Solid Sleeve Long 24	2511.522	2.00 ea	31.00 /mh	372	3,350.00 /ea	6,700	-	-	-	-	-	-	7,072	7,221
	DI RJ Compact Solid Sleeve Short 14	2511.523	2.00 ea	31.00 /mh	372	1,480.00 /ea	2,960	-	-	-	-	-	-	3,332	3,481
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.69 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,865	3,500.00 /mnth	2,415	8,280	8,397
	John Deere 624 Loader (172 HP) (M)	1900.132	0.69 mnth	-	-	-	-	-	-	5,500.00 /mnth	3,795	3,000.00 /mnth	2,070	5,865	5,941
	Water Truck, 4,000 Gallon (L)	1900.210	0.69 mnth	-	-	-	-	-	-	4,500.00 /mnth	3,105	1,200.00 /mnth	828	3,933	3,995
	Mikasa Jumping Jack Compactor (L)	1900.138	0.69 mnth	-	-	-	-	-	-	200.00 /mnth	138	100.00 /mnth	69	207	210
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.69 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,380	300.00 /mnth	207	1,587	1,615
	Pot Hole Existing	2333.010	7.00 ea	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Cross Existing	2333.010	7.00 ea	31.00 /mh	868	100.00 /ea	700	-	-	-	-	-	-	1,568	1,915
	Support Existing	2333.010	7.00 ea	31.00 /mh	651	250.00 /ea	1,750	-	-	-	-	-	-	2,401	2,661
	Warning Tape Detectable	2333.080	414.00 lf	31.00 /mh	128	0.07 /lf	29	-	-	-	-	-	-	157	209
	Tracer Wire	2333.080	434.00 lf	31.00 /mh	135	0.25 /lf	119	-	-	-	-	-	-	254	308
	Tracer Wire Test Box	2333.080	3.00 ea	31.00 /mh	372	95.00 /ea	285	-	-	-	-	-	-	657	806
	3500 psi Thrust Block Concrete	3310.105	4.00 cy	31.00 /mh	496	165.00 /cy	693	-	-	-	-	-	-	1,189	1,387
	DI Wall Pipe MJ x PE w/ Collar & Tapped Holes 14in x 1ft 0in long	15221.388	2.00 ea	31.00 /mh	248	2,300.00 /ea	4,600	-	-	-	-	-	-	4,848	4,947
	DI Wall Pipe MJ x PE w/ Collar & Tapped Holes 24in x 1ft 6in long	15221.388	1.00 ea	31.00 /mh	186	5,500.00 /ea	5,500	-	-	-	-	-	-	5,686	5,760
	DI Pipe RJ - Class 250 24	2511.401	50.00 lf	31.00 /mh	388	168.00 /lf	9,240	-	-	-	-	-	-	9,628	9,783
	Polybag 24" and smaller	2333.090	30.00 lf	31.00 /mh	9	1.40 /lf	46	-	-	-	-	-	-	56	59
	Poly Tape	2333.090	1.00 roll	31.00 /mh	-	5.00 /roll	6	-	-	-	-	-	-	6	6
	14 Bell Restrainer F/C900	2336.380	3.00 ea	31.00 /mh	186	385.00 /ea	1,155	-	-	-	-	-	-	1,341	1,415
	24 Bell Restrainer F/C900	2336.380	16.00 ea	31.00 /mh	992	850.00 /ea	13,600	-	-	-	-	-	-	14,592	14,989
	24" SE From Clarifiers to UV		414.00 lf		16,478		134,962	/lf			21,963		5,589	178,991	186,022
02605-	18" SE From Existing Clarifiers to UV														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 8-10'	2333.010	172.00 lf	31.00 /mh	853	-	-	-	-	-	-	-	-	853	1,194

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605- 18" SE From Existing Clarifiers to UV														
	Trench Backfill 8-10'	2333.020	172.00 lf	31.00 /mh	1,120	-	-	-	-	-	-	-	-	1,120	1,568
	Trench Box 10' Deep	2333.030	172.00 lf	31.00 /mh		-	-	-	-	32.00 /lf	5,504	-	-	5,504	5,614
	Utility Bedding Stone 3/4"	2305.200	78.04 cy	-	-	34.00 /ton	4,245	-	-	-	-	-	-	4,245	4,245
	Spoils to Waste	2333.060	78.04 cy	31.00 /mh	242	-	-	-	-	-	-	-	-	242	339
	PVC C-900 Pipe 18	2336.310	172.00 lf	31.00 /mh	960	83.00 /lf	15,704	-	-	-	-	-	-	16,663	17,047
	DI RJ Compact 90 18	2511.514	1.00 ea	31.00 /mh	124	2,600.00 /ea	2,600	-	-	-	-	-	-	2,724	2,774
	DI RJ Compact 45 18	2511.514	2.00 ea	31.00 /mh	248	2,180.00 /ea	4,360	-	-	-	-	-	-	4,608	4,707
	DI RJ Compact Cap 18	2511.510	2.00 ea	31.00 /mh	248	1,155.00 /ea	2,310	-	-	-	-	-	-	2,558	2,657
	DI RJ Compact Solid Sleeve Long 18	2511.522	2.00 ea	31.00 /mh	372	2,050.00 /ea	4,100	-	-	-	-	-	-	4,472	4,621
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.47 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,995	3,500.00 /mnth	1,645	5,640	5,720
	John Deere 624 Loader (172 HP) (M)	1900.132	0.47 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,585	3,000.00 /mnth	1,410	3,995	4,047
	Water Truck, 4,000 Gallon (L)	1900.210	0.47 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,115	1,200.00 /mnth	564	2,679	2,721
	Mikasa Jumping Jack Compactor (L)	1900.138	0.47 mnth	-	-	-	-	-	-	200.00 /mnth	94	100.00 /mnth	47	141	143
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.47 mnth	-	-	-	-	-	-	2,000.00 /mnth	940	300.00 /mnth	141	1,081	1,100
	Pot Hole Existing	2333.010	8.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Cross Existing	2333.010	7.00 ea	31.00 /mh	868	100.00 /ea	700	-	-	-	-	-	-	1,568	1,915
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Support Existing	2333.010	7.00 ea	31.00 /mh	217	250.00 /ea	1,750	-	-	-	-	-	-	1,967	2,054
	Warning Tape Detectable	2333.080	172.00 lf	31.00 /mh	53	0.07 /lf	12	-	-	-	-	-	-	65	87
	Tracer Wire	2333.080	190.00 lf	31.00 /mh	59	0.25 /lf	52	-	-	-	-	-	-	111	135
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	31.00 /mh	372	165.00 /cy	520	-	-	-	-	-	-	892	1,041
	Polybag 18" and smaller	2333.090	20.00 lf	31.00 /mh	6	1.40 /lf	31	-	-	-	-	-	-	37	39
	Poly Tape	2333.090	1.00 roll	31.00 /mh		5.00 /roll	6	-	-	-	-	-	-	6	6
	DI Pipe RJ - Class 250 18	2511.401	50.00 lf	31.00 /mh	279	111.00 /lf	6,105	-	-	-	-	-	-	6,384	6,496
	DI Wall Pipe MJ x PE w/ Collar & Tapped Holes 18in x 1ft 6in long	15221.388	1.00 ea	31.00 /mh	155	3,500.00 /ea	3,500	-	-	-	-	-	-	3,655	3,717
	DI Pipe 18in. dia FxPE - 2ft. 10in.	15221.030	1.00 ea	31.00 /mh	93	2,200.00 /ea	2,200	-	-	-	-	-	-	2,293	2,330
	NBG Kit 125# SS 18in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	1,200.00 /ea	1,200	-	-	-	-	-	-	1,231	1,243
	Bypass Pumping???	2240.150	1.00 ls	31.00 /mh	992	/ls		8,000.00 /ls	8,000	/ls		-	-	8,992	9,389
	Remove and Replace Landscape Rock	2322.040	20.00 cy	31.00 /mh	1,240	50.00 /cy	1,000	-	-	-	-	-	-	2,240	2,736
	18 Bell Restrainer F/C900	2336.380	8.00 ea	31.00 /mh	496	470.00 /ea	3,760	-	-	-	-	-	-	4,256	4,454
	18" SE From Existing Clarifiers to UV		172.00 lf		10,888		54,494	46.51 /lf	8,000		15,333		3,807	92,522	97,184
	02605- 24" FE From UV to Existing MH														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	360.00 lf	31.00 /mh	1,674	-	-	-	-	-	-	-	-	1,674	2,344
	Trench Backfill 6- 8'	2333.020	360.00 lf	31.00 /mh	2,232	-	-	-	-	-	-	-	-	2,232	3,125
	Utility Bedding Stone 3/4"	2305.200	213.33 cy	-	-	34.00 /ton	11,605	-	-	-	-	-	-	11,605	11,605
	Spoils to Waste	2333.060	213.33 cy	31.00 /mh	661	-	-	-	-	-	-	-	-	661	926
	PVC C-900 Pipe 24	2336.310	360.00 lf	31.00 /mh	1,674	147.00 /lf	58,212	-	-	-	-	-	-	59,886	60,556
	DI RJ Compact 90 24	2511.514	1.00 ea	31.00 /mh	186	5,470.00 /ea	5,470	-	-	-	-	-	-	5,656	5,730
	DI RJ Compact 45 24	2511.514	5.00 ea	31.00 /mh	930	3,600.00 /ea	18,000	-	-	-	-	-	-	18,930	19,302
	DI RJ Compact 22-½ 24	2511.514	1.00 ea	31.00 /mh	186	3,520.00 /ea	3,520	-	-	-	-	-	-	3,706	3,780
	DI RJ Compact Cap 24	2511.510	2.00 ea	31.00 /mh	279	1,930.00 /ea	3,860	-	-	-	-	-	-	4,139	4,251
	DI RJ Compact Solid Sleeve Long 24	2511.522	2.00 ea	31.00 /mh	372	3,350.00 /ea	6,700	-	-	-	-	-	-	7,072	7,221
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.65 mnth	-	-	-	-	-	-	8,500.00 /mnth	5,525	3,500.00 /mnth	2,275	7,800	7,911
	John Deere 624 Loader (172 HP) (M)	1900.132	0.65 mnth	-	-	-	-	-	-	5,500.00 /mnth	3,575	3,000.00 /mnth	1,950	5,525	5,597
	Water Truck, 4,000 Gallon (L)	1900.210	0.65 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,925	1,200.00 /mnth	780	3,705	3,764
	Mikasa Jumping Jack Compactor (L)	1900.138	0.65 mnth	-	-	-	-	-	-	200.00 /mnth	130	100.00 /mnth	65	195	198
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.65 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,300	300.00 /mnth	195	1,495	1,521
	Pot Hole Existing	2333.010	8.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Cross Existing	2333.010	7.00 ea	31.00 /mh	868	100.00 /ea	700	-	-	-	-	-	-	1,568	1,915
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	Support Existing	2333.010	7.00 ea	31.00 /mh	651	250.00 /ea	1,750	-	-	-	-	-	-	2,401	2,661
	Tracer Wire	2333.080	380.00 lf	31.00 /mh	118	0.25 /lf	105	-	-	-	-	-	-	222	269
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	6.00 cy	31.00 /mh	744	165.00 /cy	1,040	-	-	-	-	-	-	1,784	2,081
	Polybag 24" and smaller	2333.090	30.00 lf	31.00 /mh	9	1.40 /lf	46	-	-	-	-	-	-	56	59
	Poly Tape	2333.090	1.00 roll	31.00 /mh		5.00 /roll	6	-	-	-	-	-	-	6	6
	Bypass Pumping???	2240.150	1.00 ls	31.00 /mh	992	/ls		10,000.00 /ls	10,000	/ls		-	-	10,992	11,389
	Remodel Invert	2327.510	1.00 ea	31.00 /mh	124	360.00 /ea	360	-	-	/ch		-	-	484	534
	Tie in Exist Manhole	2327.100	1.00 ea	31.00 /mh	62	0.00 /ea	0	-	-	-	-	-	-	62	87
	Manhole Boots 24"	2327.090	1.00 ea	31.00 /mh	31	125.00 /ea	125	-	-	-	-	-	-	156	168
	Grout Pipe in Manhole 24"	2327.090	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	24 Bell Restrainer F/C900	2336.380	17.00 ea	31.00 /mh	527	850.00 /ea	14,450	-	-	-	-	-	-	14,977	15,188
	24" FE From UV to Existing MH		360.00 lf		14,056		126,363	27.78 /lf	10,000		13,505		5,265	169,189	175,082
	02605-1 14" ABI From Headworks to Orbal Reactor														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-1	14" ABI From Headworks to Orbal Reactor														
	Trench Excavtion 6- 8'	2333.010	320.00 lf	31.00 /mh	1,488	-	-	-	-	-	-	-	-	1,488	2,083
	Trench Backfill 6- 8'	2333.020	320.00 lf	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	Utility Bedding Stone 3/4"	2305.200	106.67 cy	-	-	34.00 /ton	5,803	-	-	-	-	-	-	5,803	5,803
	Spoils to Waste	2333.060	106.67 cy	31.00 /mh	331	-	-	-	-	-	-	-	-	331	463
	PVC C-900 Pipe 14	2336.310	320.00 lf	31.00 /mh	1,488	51.00 /lf	17,952	-	-	-	-	-	-	19,440	20,035
	DI RJ Compact 90 14	2511.514	4.00 ea	31.00 /mh	248	1,660.00 /ea	6,640	-	-	-	-	-	-	6,888	6,987
	DI RJ Compact 45 14	2511.514	3.00 ea	31.00 /mh	186	1,440.00 /ea	4,320	-	-	-	-	-	-	4,506	4,580
	DI RJ Compact Tee 14	2511.524	2.00 ea	31.00 /mh	186	2,370.00 /ea	4,740	-	-	-	-	-	-	4,926	5,000
	DI RJ Compact Wye 14	2511.528	1.00 ea	31.00 /mh	93	3,900.00 /ea	3,900	-	-	-	-	-	-	3,993	4,030
	DI RJ Compact Solid Sleeve Short 14	2511.523	7.00 ea	31.00 /mh	651	1,480.00 /ea	10,360	-	-	-	-	-	-	11,011	11,271
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.48 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,080	3,500.00 /mnth	1,680	5,760	5,842
	John Deere 624 Loader (172 HP) (M)	1900.132	0.48 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,640	3,000.00 /mnth	1,440	4,080	4,133
	Water Truck, 4,000 Gallon (L)	1900.210	0.48 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,160	1,200.00 /mnth	576	2,736	2,779
	Mikasa Jumping Jack Compactor (L)	1900.138	0.48 mnth	-	-	-	-	-	-	200.00 /mnth	96	100.00 /mnth	48	144	146
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.48 mnth	-	-	-	-	-	-	2,000.00 /mnth	960	300.00 /mnth	144	1,104	1,123
	Pot Hole Existing	2333.010	2.00 ea	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Cross Existing	2333.010	1.00 ea	31.00 /mh	124	100.00 /ea	100	-	-	-	-	-	-	224	274
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Support Existing	2333.010	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293
	Warning Tape Detectable	2333.080	320.00 lf	31.00 /mh	99	0.07 /lf	22	-	-	-	-	-	-	122	161
	Tracer Wire	2333.080	360.00 lf	31.00 /mh	112	0.25 /lf	99	-	-	-	-	-	-	211	255
	Tracer Wire Test Box	2333.080	6.00 ea	31.00 /mh	744	95.00 /ea	570	-	-	-	-	-	-	1,314	1,612
	3500 psi Thrust Block Concrete	3310.105	4.50 cy	31.00 /mh	558	165.00 /cy	780	-	-	-	-	-	-	1,338	1,561
	Valve - Plug MJ 14"	2519.160	2.00 ea	31.00 /mh	248	5,450.00 /ea	10,900	-	-	-	-	-	-	11,148	11,247
	Valve Box Assembly 6' Bury	2519.130	2.00 ea	31.00 /mh	186	330.00 /ea	660	-	-	-	-	-	-	846	920
	Valve Box 2' Extension	2519.130	2.00 ea	31.00 /mh	31	90.00 /ea	180	-	-	-	-	-	-	211	223
	Conc Block for Valve	2519.100	2.00 ea	31.00 /mh	31	50.00 /ea	100	-	-	-	-	-	-	131	143
	Conc Pad for Valve Box	2519.100	2.00 ea	31.00 /mh	248	50.00 /ea	100	-	-	-	-	-	-	348	447
	Valve Stem Extension	2519.100	2.00 ea	31.00 /mh	62	130.00 /ea	260	-	-	-	-	-	-	322	347
	Valve Position Indicator	2519.100	2.00 ea	31.00 /mh	62	0.01 /ea	0	-	-	-	-	-	-	62	87
	Valve - Marker Post [carsonite]	2519.100	2.00 ea	31.00 /mh	62	40.00 /ea	80	-	-	-	-	-	-	142	167
	Polybag 18" and smaller	2333.090	40.00 lf	31.00 /mh	12	1.40 /lf	62	-	-	-	-	-	-	74	79
	Poly Tape	2333.090	2.00 roll	31.00 /mh		5.00 /roll	11	-	-	-	-	-	-	11	11
	Sleeve w/Ring 316SS 18" x 14"	15121.250	1.00 ea	31.00 /mh	124	1,700.00 /ea	1,700	-	-	-	-	-	-	1,824	1,874
	Link Seal Size LS-360-S	15123.100	48.00 ea	31.00 /mh	223	15.00 /ea	720	-	-	-	-	-	-	943	1,032
	Bypass Pumping???	2240.150	1.00 ls	31.00 /mh	992	/ls		8,000.00 /ls	8,000	/ls		-	-	8,992	9,389
	DI Pipe RJ - Class 250 14	2511.401	13.00 lf	31.00 /mh	81	80.00 /lf	1,144	-	-	-	-	-	-	1,225	1,257
	14 Bell Restrainer F/C900	2336.380	15.00 ea	31.00 /mh	465	385.00 /ea	5,775	-	-	-	-	-	-	6,240	6,426
	14" ABI From Headworks to Orbal Reactor		320.00 lf		12,018		77,377	25.00 /lf	8,000		10,036		3,888	111,319	116,327
02605-1	12" RAS From Existing to Orbal														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 6- 8'	2333.010	314.00 lf	31.00 /mh	1,460	-	-	-	-	-	-	-	-	1,460	2,044
	Trench Backfill 6- 8'	2333.020	314.00 lf	31.00 /mh	1,947	-	-	-	-	-	-	-	-	1,947	2,726
	Utility Bedding Stone 3/4"	2305.200	104.67 cy	-	-	34.00 /ton	5,694	-	-	-	-	-	-	5,694	5,694
	Spoils to Waste	2333.060	104.67 cy	31.00 /mh	324	-	-	-	-	-	-	-	-	324	454
	PVC C-900 Pipe 12	2336.310	314.00 lf	31.00 /mh	1,168	47.00 /lf	16,234	-	-	-	-	-	-	17,402	17,869
	DI RJ Compact 90 12	2511.514	1.00 ea	31.00 /mh	62	1,000.00 /ea	1,000	-	-	-	-	-	-	1,062	1,087
	DI RJ Compact 45 12	2511.514	4.00 ea	31.00 /mh	248	890.00 /ea	3,560	-	-	-	-	-	-	3,808	3,907
	DI RJ Compact Wye 12	2511.528	1.00 ea	31.00 /mh	62	1,830.00 /ea	1,830	-	-	-	-	-	-	1,892	1,917
	DI RJ Compact Solid Sleeve Short 12	2511.523	4.00 ea	31.00 /mh	372	840.00 /ea	3,360	-	-	-	-	-	-	3,732	3,881
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.34 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,890	3,500.00 /mnth	1,190	4,080	4,138
	John Deere 624 Loader (172 HP) (M)	1900.132	0.34 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,870	3,000.00 /mnth	1,020	2,890	2,927
	Water Truck, 4,000 Gallon (L)	1900.210	0.34 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,530	1,200.00 /mnth	408	1,938	1,969
	Mikasa Jumping Jack Compactor (L)	1900.138	0.34 mnth	-	-	-	-	-	-	200.00 /mnth	68	100.00 /mnth	34	102	103
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.34 mnth	-	-	-	-	-	-	2,000.00 /mnth	680	300.00 /mnth	102	782	796
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cross Existing	2333.010	2.00 ea	31.00 /mh	124	100.00 /ea	200	-	-	-	-	-	-	324	374
	Cut Existing	2333.010	2.00 ea	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Support Existing	2333.010	2.00 ea	31.00 /mh	186	250.00 /ea	500	-	-	-	-	-	-	686	760
	Warning Tape Detectable	2333.080	164.00 lf	31.00 /mh	51	0.07 /lf	11	-	-	-	-	-	-	62	83
	Tracer Wire	2333.080	180.00 lf	31.00 /mh	56	0.25 /lf	50	-	-	-	-	-	-	105	128
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	3500 psi Thrust Block Concrete	3310.105	4.50 cy	31.00 /mh	558	165.00 /cy	780	-	-	-	-	-	-	1,338	1,561
	Valve - Plug MJ 12"	2519.160	1.00 ea	31.00 /mh	62	4,070.00 /ea	4,070	-	-	-	-	-	-	4,132	4,157
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	31.00 /mh	93	330.00 /ea	330	-	-	-	-	-	-	423	460
	Valve Box 2' Extension	2519.130	1.00 ea	31.00 /mh	16	90.00 /ea	90	-	-	-	-	-	-	106	112
	Conc Block for Valve	2519.100	1.00 ea	31.00 /mh	16	50.00 /ea	50	-	-	-	-	-	-	66	72

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-1	12" RAS From Existing to Orbal														
	Conc Pad for Valve Box	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	Valve Stem Extension	2519.100	1.00 ea	31.00 /mh	31	130.00 /ea	130	-	-	-	-	-	-	161	173
	Valve Position Indicator	2519.100	1.00 ea	31.00 /mh	31	0.01 /ea	0	-	-	-	-	-	-	31	43
	Valve - Marker Post [carsonite]	2519.100	1.00 ea	31.00 /mh	31	40.00 /ea	40	-	-	-	-	-	-	71	83
	Sleeve w/Ring 316SS 16" x 14"	15121.250	1.00 ea	31.00 /mh	62	1,500.00 /ea	1,500	-	-	-	-	-	-	1,562	1,587
	Link Seal Size LS-360-S-316	15123.100	42.00 ea	31.00 /mh	195	15.00 /ea	630	-	-	-	-	-	-	825	903
	Polybag 18" and smaller	2333.090	30.00 lf	31.00 /mh	9	1.40 /lf	46	-	-	-	-	-	-	56	59
	Poly Tape	2333.090	2.00 roll	31.00 /mh		5.00 /ro ll	11	-	-	-	-	-	-	11	11
	Bypass Pumping???	2240.150	1.00 ls	31.00 /mh	992	/ls		8,000.00 /ls	8,000	/ls		-	-	8,992	9,389
	12 Bell Restrainer F/C900	2336.380	15.00 ea	31.00 /mh	465	200.00 /ea	3,000	-	-	-	-	-	-	3,465	3,651
	12" RAS From Existing to Orbal		314.00 lf		9,861		43,506	25.48 /lf	8,000		7,138		2,754	71,258	75,345
02605-1	24" ML From Aeration Basin to Splitter Box														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 10-12'	2333.010	120.00 lf	31.00 /mh	632	-	-	-	-	-	-	-	-	632	885
	Trench Backfill 10-12'	2333.020	120.00 lf	31.00 /mh	818	-	-	-	-	-	-	-	-	818	1,146
	Utility Bedding Stone 3/4"	2305.200	71.11 cy	-	-	34.00 /to n	3,868	-	-	-	-	-	-	3,868	3,868
	Spoils to Waste	2333.060	71.11 cy	31.00 /mh	220	-	-	-	-	-	-	-	-	220	309
	PVC C-900 Pipe 24	2336.310	120.00 lf	31.00 /mh	930	147.00 /lf	19,404	-	-	-	-	-	-	20,334	20,706
	DI RJ Compact 90 24	2511.514	2.00 ea	31.00 /mh	372	5,470.00 /ea	10,940	-	-	-	-	-	-	11,312	11,461
	DI RJ Compact Tee 24	2511.524	1.00 ea	31.00 /mh	186	6,800.00 /ea	6,800	-	-	-	-	-	-	6,986	7,060
	DI RJ Compact Solid Sleeve Long 24	2511.522	2.00 ea	31.00 /mh	372	3,350.00 /ea	6,700	-	-	-	-	-	-	7,072	7,221
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.21 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,785	3,500.00 /mnth	735	2,520	2,556
	John Deere 624 Loader (172 HP) (M)	1900.132	0.21 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,155	3,000.00 /mnth	630	1,785	1,808
	Water Truck, 4,000 Gallon (L)	1900.210	0.21 mnth	-	-	-	-	-	-	4,500.00 /mnth	945	1,200.00 /mnth	252	1,197	1,216
	Mikasa Jumping Jack Compactor (L)	1900.138	0.21 mnth	-	-	-	-	-	-	200.00 /mnth	42	100.00 /mnth	21	63	64
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.21 mnth	-	-	-	-	-	-	2,000.00 /mnth	420	300.00 /mnth	63	483	491
	Tracer Wire	2333.080	140.00 lf	31.00 /mh	43	0.25 /lf	39	-	-	-	-	-	-	82	99
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	31.00 /mh	372	165.00 /cy	520	-	-	-	-	-	-	892	1,041
	DI Pipe RJ - Class 250 24	2511.401	20.00 lf	31.00 /mh	155	168.00 /lf	3,696	-	-	-	-	-	-	3,851	3,913
	DI Floor Pipe PE x PE w/ Collar 24in x 7'-0"	15221.248	1.00 ea	31.00 /mh	217	2,800.00 /ea	2,800	-	-	-	-	-	-	3,017	3,104
	DI RJ Compact Cap 24	2511.510	1.00 ea	31.00 /mh	140	1,930.00 /ea	1,930	-	-	-	-	-	-	2,070	2,125
	DI RJ Compact Red 36x24	2511.520	1.00 ea	31.00 /mh	248	10,420.00 /ea	10,420	-	-	-	-	-	-	10,668	10,767
	DI Pipe 36in. dia FxPE - 12ft. 0in.	15221.030	1.00 ea	31.00 /mh	248	14,200.00 /ea	14,200	-	-	-	-	-	-	14,448	14,547
	Polybag 24" and smaller	2333.090	40.00 lf	31.00 /mh	12	1.40 /lf	62	-	-	-	-	-	-	74	79
	Poly Tape	2333.090	2.00 roll	31.00 /mh		5.00 /ro ll	11	-	-	-	-	-	-	11	11
	24 Bell Restrainer F/C900	2336.380	5.00 ea	31.00 /mh	310	850.00 /ea	4,250	-	-	-	-	-	-	4,560	4,684
	24" ML From Aeration Basin to Splitter Box		120.00 lf		5,587		85,879	/lf			4,397		1,701	97,564	99,886
02605-1	16" ML From SplitterTo Clarifier 5														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	500.00 /ea	1,000	-	-	1,596	1,814
	Trench Excavtion 14-16'	2333.010	204.00 lf	31.00 /mh	1,455	-	-	-	-	-	-	-	-	1,455	2,036
	Trench Backfill 14-16'	2333.020	204.00 lf	31.00 /mh	2,024	-	-	-	-	-	-	-	-	2,024	2,833
	Trench Box 16' Deep	2333.030	60.00 lf	31.00 /mh	-	-	-	-	-	32.00 /lf	1,920	-	-	1,920	1,958
	Utility Bedding Stone 3/4"	2305.200	81.67 cy	-	-	34.00 /to n	4,443	-	-	-	-	-	-	4,443	4,443
	Spoils to Waste	2333.060	81.67 cy	31.00 /mh	253	-	-	-	-	-	-	-	-	253	354
	PVC C-900 Pipe 16	2336.310	180.00 lf	31.00 /mh	893	66.00 /lf	13,068	-	-	-	-	-	-	13,961	14,318
	DI RJ Compact 90 16	2511.514	3.00 ea	31.00 /mh	372	2,080.00 /ea	6,240	-	-	-	-	-	-	6,612	6,761
	DI RJ Compact 45 16	2511.514	5.00 ea	31.00 /mh	620	1,800.00 /ea	9,000	-	-	-	-	-	-	9,620	9,868
	DI RJ Compact 11-¼ 16	2511.514	2.00 ea	31.00 /mh	248	1,760.00 /ea	3,520	-	-	-	-	-	-	3,768	3,867
	DI RJ Compact Solid Sleeve Long 16	2511.522	4.00 ea	31.00 /mh	620	1,700.00 /ea	6,800	-	-	-	-	-	-	7,420	7,668
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.43 mnth	-	-	-	-	-	-	8,500.00 /mnth	3,655	3,500.00 /mnth	1,505	5,160	5,233
	John Deere 624 Loader (172 HP) (M)	1900.132	0.43 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,365	3,000.00 /mnth	1,290	3,655	3,702
	Water Truck, 4,000 Gallon (L)	1900.210	0.43 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,935	1,200.00 /mnth	516	2,451	2,490
	Mikasa Jumping Jack Compactor (L)	1900.138	0.43 mnth	-	-	-	-	-	-	200.00 /mnth	86	100.00 /mnth	43	129	131
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.43 mnth	-	-	-	-	-	-	2,000.00 /mnth	860	300.00 /mnth	129	989	1,006
	Warning Tape Detectable	2333.080	180.00 lf	31.00 /mh	56	0.07 /lf	13	-	-	-	-	-	-	68	91
	Tracer Wire	2333.080	220.00 lf	31.00 /mh	68	0.25 /lf	61	-	-	-	-	-	-	129	156
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	3500 psi Thrust Block Concrete	3310.105	9.00 cy	31.00 /mh	1,116	165.00 /cy	1,559	-	-	-	-	-	-	2,675	3,122
	DI Pipe RJ - Class 250 16	2511.401	40.00 lf	31.00 /mh	198	90.00 /lf	3,960	-	-	-	-	-	-	4,158	4,238
	DI Floor Pipe PE x PE w/ Collar 16in x 4ft 0in long	15221.248	1.00 ea	31.00 /mh	124	1,200.00 /ea	1,200	-	-	-	-	-	-	1,324	1,374
	DI Floor Pipe PE x PE w/ Collar 16in x 6ft 0in long	15221.248	1.00 ea	31.00 /mh	124	1,600.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	Polybag 18" and smaller	2333.090	30.00 lf	31.00 /mh	9	1.40 /lf	46	-	-	-	-	-	-	56	59
	Poly Tape	2333.090	1.00 roll	31.00 /mh		5.00 /ro ll	6	-	-	-	-	-	-	6	6
	Dewatering	2240.050	1.00 ls	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Trench Stabilization Rock	2305.050	20.00 cy	-	-	36.00 /to n	1,166	-	-	-	-	-	-	1,166	1,166

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-1 16" ML From SplitterTo Clarifier 5														
	16 Bell Restrainer F/C900	2336.380	8.00 ea	31.00 /mh	372	433.00 /ea	3,464	-	-	-	-	-	-	3,836	3,985
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	0.12 mnth	7,296.00 /mnth	876	350.00 /mnt h	42	-	-	9,500.00 /mnth	1,140	1,500.00 /mnth	180	2,238	2,611
	16" ML From SplitterTo Clarifier 5		180.00 lf		10,543		56,477	/lf			12,961		3,663	83,645	88,121
	02605-2 4" DS From Digesters to Process Bld.														
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	31.00 /mh	744	50.00 /ea	150	-	-	50.00 /ea	150	-	-	1,044	1,345
	Trench Excavtion 6- 8'	2333.010	550.00 lf	31.00 /mh	2,558	-	-	-	-	-	-	-	-	2,558	3,581
	Trench Excavtion 14-16'	2333.010	200.00 lf	31.00 /mh	1,860	-	-	-	-	-	-	-	-	1,860	2,604
	Trench Backfill 6- 8'	2333.020	550.00 lf	31.00 /mh	3,410	-	-	-	-	-	-	-	-	3,410	4,774
	Trench Backfill 14-16'	2333.020	200.00 lf	31.00 /mh	2,480	-	-	-	-	-	-	-	-	2,480	3,472
	Trench Box 16' Deep	2333.030	200.00 lf	31.00 /mh	-	-	-	-	-	32.00 /lf	6,400	-	-	6,400	6,528
	Utility Bedding Peastone	2305.200	208.33 cy	-	-	24.00 /ton	8,000	-	-	-	-	-	-	8,000	8,000
	Spoils to Waste	2333.060	208.33 cy	31.00 /mh	646	-	-	-	-	-	-	-	-	646	904
	PVC C-900 Pipe 4	2336.310	750.00 lf	31.00 /mh	2,093	7.00 /lf	5,775	-	-	-	-	-	-	7,868	8,704
	DI RJ Compact 90 4	2511.514	4.00 ea	31.00 /mh	124	300.00 /ea	1,200	-	-	-	-	-	-	1,324	1,374
	DI RJ Compact 45 4	2511.514	12.00 ea	31.00 /mh	372	280.00 /ea	3,360	-	-	-	-	-	-	3,732	3,881
	DI RJ Compact Tee 4	2511.524	3.00 ea	31.00 /mh	186	430.00 /ea	1,290	-	-	-	-	-	-	1,476	1,550
	DI RJ Compact Wye 4	2511.528	7.00 ea	31.00 /mh	434	506.00 /ea	3,542	-	-	-	-	-	-	3,976	4,150
	DI RJ Compact Solid Sleeve Short 4	2511.523	6.00 ea	31.00 /mh	186	290.00 /ea	1,740	-	-	-	-	-	-	1,926	2,000
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.08 mnth	-	-	-	-	-	-	8,500.00 /mnth	9,180	3,500.00 /mnth	3,780	12,960	13,144
	John Deere 624 Loader (172 HP) (M)	1900.132	1.08 mnth	-	-	-	-	-	-	5,500.00 /mnth	5,940	3,000.00 /mnth	3,240	9,180	9,299
	Water Truck, 4,000 Gallon (L)	1900.210	1.08 mnth	-	-	-	-	-	-	4,500.00 /mnth	4,860	1,200.00 /mnth	1,296	6,156	6,253
	Mikasa Jumping Jack Compactor (L)	1900.138	1.08 mnth	-	-	-	-	-	-	200.00 /mnth	216	100.00 /mnth	108	324	328
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.08 mnth	-	-	-	-	-	-	2,000.00 /mnth	2,160	300.00 /mnth	324	2,484	2,527
	Tracer Wire	2333.080	750.00 lf	31.00 /mh	233	0.25 /lf	206	-	-	-	-	-	-	439	532
	Warning Tape Detectable	2333.080	750.00 lf	31.00 /mh	233	0.07 /lf	53	-	-	-	-	-	-	285	378
	3500 psi Thrust Block Concrete	3310.105	5.00 cy	31.00 /mh	620	165.00 /cy	866	-	-	-	-	-	-	1,486	1,734
	Polybag 12" and Smaller	2333.090	150.00 lf	31.00 /mh	47	0.75 /lf	124	-	-	-	-	-	-	170	189
	Pot Hole Existing	2333.010	7.00 ea	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Cross Existing	2333.010	5.00 ea	31.00 /mh	310	100.00 /ea	500	-	-	-	-	-	-	810	934
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Support Existing	2333.010	5.00 ea	31.00 /mh	465	250.00 /ea	1,250	-	-	-	-	-	-	1,715	1,901
	Warning Tape Detectable	2333.080	750.00 lf	31.00 /mh	233	0.07 /lf	53	-	-	-	-	-	-	285	378
	Tracer Wire	2333.080	820.00 lf	31.00 /mh	254	0.25 /lf	226	-	-	-	-	-	-	480	581
	Tracer Wire Test Box	2333.080	7.00 ea	31.00 /mh	868	95.00 /ea	665	-	-	-	-	-	-	1,533	1,880
	Valve - Plug MJ 4" (2 for tie in purpose)	2519.160	4.00 ea	31.00 /mh	496	1,320.00 /ea	5,280	-	-	-	-	-	-	5,776	5,974
	Valve Box Assembly 6' Bury	2519.130	2.00 ea	31.00 /mh	186	330.00 /ea	660	-	-	-	-	-	-	846	920
	Valve Box 2' Extension	2519.130	10.00 ea	31.00 /mh	155	90.00 /ea	900	-	-	-	-	-	-	1,055	1,117
	Conc Block for Valve	2519.100	2.00 ea	31.00 /mh	31	50.00 /ea	100	-	-	-	-	-	-	131	143
	Conc Pad for Valve Box	2519.100	2.00 ea	31.00 /mh	248	50.00 /ea	100	-	-	-	-	-	-	348	447
	Valve Stem Extension	2519.100	2.00 ea	31.00 /mh	62	130.00 /ea	260	-	-	-	-	-	-	322	347
	Valve Position Indicator	2519.100	2.00 ea	31.00 /mh	62	0.01 /ea	0	-	-	-	-	-	-	62	87
	Valve - Marker Post [carsonite]	2519.100	2.00 ea	31.00 /mh	62	40.00 /ea	80	-	-	-	-	-	-	142	167
	4 Bell Restrainer F/C900	2336.380	36.00 ea	31.00 /mh	1,116	70.00 /ea	2,520	-	-	-	-	-	-	3,636	4,082
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	9.00 ea	31.00 /mh	837	750.00 /ea	6,750	-	-	-	-	-	-	7,587	7,922
	DI Blind Flange 4"	15221.405	7.00 ea	31.00 /mh	217	75.00 /ea	525	-	-	-	-	-	-	742	829
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	7.00 ea	31.00 /mh	217	300.00 /ea	2,100	-	-	-	-	-	-	2,317	2,404
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	7.00 ea	31.00 /mh	868	125.00 /ea	875	-	-	-	-	-	-	1,743	2,090
	Concrete Pad for Cleanout Cover	2519.100	7.00 ea	31.00 /mh	434	50.00 /ea	350	-	-	-	-	-	-	784	958
	Sleeve SS 8" x 28"	15121.200	2.00 ea	31.00 /mh	186	1,000.00 /ea	2,000	-	-	-	-	-	-	2,186	2,260
	Link Seal Size LS-410-S	15123.100	42.00 ea	31.00 /mh	195	16.00 /ea	672	-	-	-	-	-	-	867	945
	Core Drilled Hole - 8 -*	15122.100	1.00 ea	31.00 /mh	31	200.00 /ea	200	250.00 /ea	250	-	-	-	-	481	493
	4" DS From Digesters to Process Bld.		750.00 lf		24,748		52,421	0.33 /lf	250		28,906		8,748	115,073	125,551
	02605-2 8" WAS from Digesters 600														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	140.00 lf	31.00 /mh	781	-	-	-	-	-	-	-	-	781	1,094
	Trench Backfill 6- 8'	2333.020	140.00 lf	31.00 /mh	998	-	-	-	-	-	-	-	-	998	1,397
	Utility Bedding Peastone	2305.200	38.89 cy	-	-	24.00 /ton	1,493	-	-	-	-	-	-	1,493	1,493
	Spoils to Waste	2333.060	38.89 cy	31.00 /mh	121	-	-	-	-	-	-	-	-	121	169
	PVC C-900 Pipe 4	2336.310	20.00 lf	31.00 /mh	56	7.00 /lf	154	-	-	-	-	-	-	210	232
	PVC C-900 Pipe 8	2336.310	120.00 lf	31.00 /mh	409	22.00 /lf	2,904	-	-	-	-	-	-	3,313	3,477
	DI RJ Compact 45 4	2511.514	1.00 ea	31.00 /mh	62	280.00 /ea	280	-	-	-	-	-	-	342	367
	DI RJ Compact 45 6	2511.514	2.00 ea	31.00 /mh	124	400.00 /ea	800	-	-	-	-	-	-	924	974
	DI RJ Compact 45 8	2511.514	1.00 ea	31.00 /mh	62	470.00 /ea	470	-	-	-	-	-	-	532	557
	DI RJ Compact Tee 4	2511.524	1.00 ea	31.00 /mh	62	430.00 /ea	430	-	-	-	-	-	-	492	517
	DI RJ Compact Tee 8	2511.524	1.00 ea	31.00 /mh	93	760.00 /ea	760	-	-	-	-	-	-	853	890
	DI RJ Compact Tee 8x4	2511.524	2.00 ea	31.00 /mh	186	630.00 /ea	1,260	-	-	-	-	-	-	1,446	1,520
	DI RJ Compact Wye 8x6	2511.528	2.00 ea	31.00 /mh	186	910.00 /ea	1,820	-	-	-	-	-	-	2,006	2,080

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-2	8" WAS from Digesters 600														
	DI RJ Compact Wye 8	2511.528	1.00 ea	31.00 /mh	93	1,020.00 /ea	1,020	-	-	-	-	-	-	1,113	1,150
	DI RJ Compact Red 8x4	2511.520	1.00 ea	31.00 /mh	62	380.00 /ea	380	-	-	-	-	-	-	442	467
	DI RJ Compact Solid Sleeve Short 4	2511.523	3.00 ea	31.00 /mh	186	290.00 /ea	870	-	-	-	-	-	-	1,056	1,130
	DI RJ Compact Solid Sleeve Short 8	2511.523	2.00 ea	31.00 /mh	124	520.00 /ea	1,040	-	-	-	-	-	-	1,164	1,214
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,210	3,500.00 /mnth	910	3,120	3,164
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,430	3,000.00 /mnth	780	2,210	2,239
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,170	1,200.00 /mnth	312	1,482	1,505
	Mikasa Jumping Jack Compactor (L)	1900.138	0.26 mnth	-	-	-	-	-	-	200.00 /mnth	52	100.00 /mnth	26	78	79
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.26 mnth	-	-	-	-	-	-	2,000.00 /mnth	520	300.00 /mnth	78	598	608
	Tracer Wire	2333.080	160.00 lf	31.00 /mh	50	0.25 /lf	44	-	-	-	-	-	-	94	113
	Warning Tape Detectable	2333.080	140.00 lf	31.00 /mh	43	0.07 /lf	10	-	-	-	-	-	-	53	71
	3500 psi Thrust Block Concrete	3310.105	2.00 cy	31.00 /mh	248	165.00 /cy	347	-	-	-	-	-	-	595	694
	Polybag 12" and Smaller	2333.090	50.00 lf	31.00 /mh	16	0.75 /lf	41	-	-	-	-	-	-	57	63
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cut Existing	2333.010	3.00 ea	31.00 /mh	186	-	-	-	-	-	-	-	-	186	260
	Tie to Existing	2333.010	3.00 ea	31.00 /mh	186	50.00 /ea	150	-	-	-	-	-	-	336	410
	Tracer Wire Test Box	2333.080	3.00 ea	31.00 /mh	372	95.00 /ea	285	-	-	-	-	-	-	657	806
	Conc Pad for Valve Box	2519.100	2.00 ea	31.00 /mh	248	50.00 /ea	100	-	-	-	-	-	-	348	447
	DI Pipe 6in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	186	900.00 /ea	1,800	-	-	-	-	-	-	1,986	2,060
	NBG Kit 125# SS 6in [316SS & 1/8" EPDM]	15125.012	2.00 ea	31.00 /mh	62	350.00 /ea	700	-	-	-	-	-	-	762	787
	DI Blind Flange 6"	15221.405	2.00 ea	31.00 /mh	62	130.00 /ea	260	-	-	-	-	-	-	322	347
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	2.00 ea	31.00 /mh	248	125.00 /ea	250	-	-	-	-	-	-	498	597
	8 Bell Restrainer F/C900	2336.380	5.00 ea	31.00 /mh	155	138.00 /ea	690	-	-	-	-	-	-	845	907
	Valve - Plug MJ 8"	2519.160	1.00 ea	31.00 /mh	124	3,250.00 /ea	3,250	-	-	-	-	-	-	3,374	3,424
	8" WAS from Digesters 600		140.00 lf		6,410		21,658	/lf			5,432		2,106	35,606	38,279
02605-2	4" Screw Press Pressate SPP														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6'- 8'	2333.010	265.00 lf	31.00 /mh	1,479	-	-	-	-	-	-	-	-	1,479	2,070
	Trench Backfill 6'- 8'	2333.020	265.00 lf	31.00 /mh	1,889	-	-	-	-	-	-	-	-	1,889	2,645
	Utility Bedding Peastone	2305.200	73.61 cy	-	-	24.00 /ton	2,827	-	-	-	-	-	-	2,827	2,827
	Spoils to Waste	2333.060	73.61 cy	31.00 /mh	228	-	-	-	-	-	-	-	-	228	319
	PVC C-900 Pipe 4	2336.310	265.00 lf	31.00 /mh	739	7.00 /lf	2,041	-	-	-	-	-	-	2,780	3,076
	DI RJ Compact 90 4	2511.514	1.00 ea	31.00 /mh	62	300.00 /ea	300	-	-	-	-	-	-	362	387
	DI RJ Compact 45 4	2511.514	6.00 ea	31.00 /mh	372	280.00 /ea	1,680	-	-	-	-	-	-	2,052	2,201
	DI RJ Compact Wye 4	2511.528	2.00 ea	31.00 /mh	124	506.00 /ea	1,012	-	-	-	-	-	-	1,136	1,186
	DI RJ Compact Solid Sleeve Short 4	2511.523	2.00 ea	31.00 /mh	124	290.00 /ea	580	-	-	-	-	-	-	704	754
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,210	3,500.00 /mnth	910	3,120	3,164
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,430	3,000.00 /mnth	780	2,210	2,239
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,170	1,200.00 /mnth	312	1,482	1,505
	Mikasa Jumping Jack Compactor (L)	1900.138	0.26 mnth	-	-	-	-	-	-	200.00 /mnth	52	100.00 /mnth	26	78	79
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.26 mnth	-	-	-	-	-	-	2,000.00 /mnth	520	300.00 /mnth	78	598	608
	Tracer Wire	2333.080	300.00 lf	31.00 /mh	93	0.25 /lf	83	-	-	-	-	-	-	176	213
	Warning Tape Detectable	2333.080	265.00 lf	31.00 /mh	82	0.07 /lf	19	-	-	-	-	-	-	101	134
	Polybag 12" and Smaller	2333.090	100.00 lf	31.00 /mh	31	0.75 /lf	83	-	-	-	-	-	-	114	126
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	4 Bell Restrainer F/C900	2336.380	12.00 ea	31.00 /mh	93	70.00 /ea	840	-	-	-	-	-	-	933	970
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	186	750.00 /ea	1,500	-	-	-	-	-	-	1,686	1,760
	Conc Pad for Valve Box	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	PVC Sch 80 PIPE 2" PE	15211.203	20.00 lf	31.00 /mh	130	4.00 /lf	80	-	-	-	-	-	-	210	262
	Core Drilled Hole - 8 -*	15122.100	1.00 ea	31.00 /mh	31	200.00 /ea	200	150.00 /ea	150	-	-	-	-	381	393
	4" Screw Press Pressate SPP		265.00 lf		6,656		12,033	0.57 /lf	150		5,432		2,106	26,377	29,148
02605-2	6" UV DRAIN DR														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 8-10'	2333.010	400.00 lf	31.00 /mh	2,480	-	-	-	-	-	-	-	-	2,480	3,472
	Trench Backfill 8-10'	2333.020	400.00 lf	31.00 /mh	3,100	-	-	-	-	-	-	-	-	3,100	4,340
	Utility Bedding Peastone	2305.200	111.11 cy	-	-	24.00 /ton	4,267	-	-	-	-	-	-	4,267	4,267
	Spoils to Waste	2333.060	111.11 cy	31.00 /mh	344	-	-	-	-	-	-	-	-	344	482
	PVC C-900 Pipe 6	2336.310	400.00 lf	31.00 /mh	1,240	13.00 /lf	5,720	-	-	-	-	-	-	6,960	7,456
	DI RJ Compact 90 6	2511.514	1.00 ea	31.00 /mh	62	425.00 /ea	425	-	-	-	-	-	-	487	512
	DI RJ Compact 45 6	2511.514	4.00 ea	31.00 /mh	248	400.00 /ea	1,600	-	-	-	-	-	-	1,848	1,947
	DI RJ Compact Tee 6	2511.524	1.00 ea	31.00 /mh	62	630.00 /ea	630	-	-	-	-	-	-	692	717
	DI RJ Compact Wye 6	2511.528	4.00 ea	31.00 /mh	248	710.00 /ea	2,840	-	-	-	-	-	-	3,088	3,187
	DI RJ Compact Solid Sleeve Short 6	2511.523	1.00 ea	31.00 /mh	62	440.00 /ea	440	-	-	-	-	-	-	502	527
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.34 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,890	3,500.00 /mnth	1,190	4,080	4,138
	John Deere 624 Loader (172 HP) (M)	1900.132	0.34 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,870	3,000.00 /mnth	1,020	2,890	2,927
	Water Truck, 4,000 Gallon (L)	1900.210	0.34 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,530	1,200.00 /mnth	408	1,938	1,969

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-2	6" UV DRAIN DR														
	Mikasa Jumping Jack Compactor (L)	1900.138	0.34 mnth	-	-	-	-	-	-	200.00 /mnth	68	100.00 /mnth	34	102	103
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.34 mnth	-	-	-	-	-	-	2,000.00 /mnth	680	300.00 /mnth	102	782	796
	Tracer Wire	2333.080	420.00 lf	31.00 /mh	130	0.25 /lf	116	-	-	-	-	-	-	246	298
	Warning Tape Detectable	2333.080	400.00 lf	31.00 /mh	124	0.07 /lf	28	-	-	-	-	-	-	152	202
	Polybag 12" and Smaller	2333.090	120.00 lf	31.00 /mh	37	0.75 /lf	99	-	-	-	-	-	-	136	151
	Pot Hole Existing	2333.010	2.00 ea	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Cross Existing	2333.010	1.00 ea	31.00 /mh	62	100.00 /ea	100	-	-	-	-	-	-	162	187
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	DI Pipe 6in. dia FxPE - 10ft. 0in.	15221.030	4.00 ea	31.00 /mh	124	900.00 /ea	3,600	-	-	-	-	-	-	3,724	3,774
	DI Blind Flange 6"	15221.405	4.00 ea	31.00 /mh	124	130.00 /ea	520	-	-	-	-	-	-	644	694
	6 Bell Restrainer F/C900	2336.380	19.00 ea	31.00 /mh	589	90.00 /ea	1,710	-	-	-	-	-	-	2,299	2,535
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	4.00 ea	31.00 /mh	496	125.00 /ea	500	-	-	-	-	-	-	996	1,194
	Conc Pad for Valve Box	2519.100	4.00 ea	31.00 /mh	496	50.00 /ea	200	-	-	-	-	-	-	696	894
	Core Drilled Hole - 10 -*	15122.100	1.00 ea	31.00 /mh	31	200.00 /ea	200	150.00 /ea	150	-	-	-	-	381	393
	Link Seal Size LS-475-S	15123.100	10.00 ea	31.00 /mh	47	16.00 /ea	160	-	-	-	-	-	-	207	225
	Trench Box 10' Deep	2333.030	400.00 lf	31.00 /mh	-	-	-	-	-	32.00 /lf	12,800	-	-	12,800	13,056
	6" UV DRAIN DR		400.00 lf		10,850		23,394	0.38 /lf	150		19,888		2,754	57,037	61,774
02605-2	4" POTABLE WATER W1														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	115.00 lf	31.00 /mh	642	-	-	-	-	-	-	-	-	642	898
	Trench Backfill 6- 8'	2333.020	115.00 lf	31.00 /mh	820	-	-	-	-	-	-	-	-	820	1,148
	Utility Bedding Peastone	2305.200	31.94 cy	-	-	24.00 /ton	1,227	-	-	-	-	-	-	1,227	1,227
	Spoils to Waste	2333.060	31.94 cy	31.00 /mh	99	-	-	-	-	-	-	-	-	99	139
	PVC C-900 Pipe 4	2336.310	115.00 lf	31.00 /mh	321	7.00 /lf	886	-	-	-	-	-	-	1,206	1,335
	DI RJ Compact 90 4	2511.514	1.00 ea	31.00 /mh	62	300.00 /ea	300	-	-	-	-	-	-	362	387
	DI RJ Compact 45 4	2511.514	1.00 ea	31.00 /mh	62	280.00 /ea	280	-	-	-	-	-	-	342	367
	DI RJ Compact Tee 4	2511.524	1.00 ea	31.00 /mh	62	430.00 /ea	430	-	-	-	-	-	-	492	517
	DI RJ Compact Solid Sleeve Short 4	2511.523	2.00 ea	31.00 /mh	124	290.00 /ea	580	-	-	-	-	-	-	704	754
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Tracer Wire	2333.080	140.00 lf	31.00 /mh	43	0.25 /lf	39	-	-	-	-	-	-	82	99
	Warning Tape Detectable	2333.080	115.00 lf	31.00 /mh	36	0.07 /lf	8	-	-	-	-	-	-	44	58
	3500 psi Thrust Block Concrete	3310.105	1.00 cy	31.00 /mh	124	165.00 /cy	173	-	-	-	-	-	-	297	347
	Polybag 12" and Smaller	2333.090	25.00 lf	31.00 /mh	8	0.75 /lf	21	-	-	-	-	-	-	28	31
	Pot Hole Existing	2333.010	1.00 ea	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	Disinfection/Chlorination of PW (Enter Line Size)	1166.100	1.00 ea	31.00 /mh	248	150.00 /ea	150	-	-	-	-	-	-	398	497
	Valve - Plug MJ 4"	2519.160	1.00 ea	31.00 /mh	62	1,320.00 /ea	1,320	-	-	-	-	-	-	1,382	1,407
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	31.00 /mh	93	330.00 /ea	330	-	-	-	-	-	-	423	460
	Valve Box 2' Extension	2519.130	1.00 ea	31.00 /mh	16	90.00 /ea	90	-	-	-	-	-	-	106	112
	Conc Block for Valve	2519.100	1.00 ea	31.00 /mh	16	50.00 /ea	50	-	-	-	-	-	-	66	72
	Conc Pad for Valve Box	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	Valve Stem Extension	2519.100	1.00 ea	31.00 /mh	31	130.00 /ea	130	-	-	-	-	-	-	161	173
	4 Bell Restrainer F/C900	2336.380	5.00 ea	31.00 /mh	155	70.00 /ea	350	-	-	-	-	-	-	505	567
	4" POTABLE WATER W1		115.00 lf		3,704		6,703	/lf			3,569		1,377	15,353	16,906
02605-2	4" NON POTABLE WATER W3														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 4- 6'	2333.010	1,410.00 lf	31.00 /mh	6,557	-	-	-	-	-	-	-	-	6,557	9,179
	Trench Backfill 4- 6'	2333.020	1,410.00 lf	31.00 /mh	10,053	-	-	-	-	-	-	-	-	10,053	14,075
	Utility Bedding Peastone	2305.200	380.56 cy	-	-	24.00 /ton	14,613	-	-	-	-	-	-	14,613	14,613
	Spoils to Waste	2333.060	380.56 cy	31.00 /mh	1,180	-	-	-	-	-	-	-	-	1,180	1,652
	PVC C-900 Pipe 4 DR25	2336.310	1,330.00 lf	31.00 /mh	3,711	7.00 /lf	10,241	-	-	-	-	-	-	13,952	15,436
	DI RJ Compact 90 4	2511.514	10.00 ea	31.00 /mh	620	300.00 /ea	3,000	-	-	-	-	-	-	3,620	3,868
	DI RJ Compact 45 4	2511.514	12.00 ea	31.00 /mh	744	280.00 /ea	3,360	-	-	-	-	-	-	4,104	4,402
	DI RJ Compact Tee 4	2511.524	16.00 ea	31.00 /mh	992	430.00 /ea	6,880	-	-	-	-	-	-	7,872	8,269
	DI RJ Compact Cross 4	2511.512	1.00 ea	31.00 /mh	62	615.00 /ea	615	-	-	-	-	-	-	677	702
	DI RJ Compact Solid Sleeve Short 4	2511.523	5.00 ea	31.00 /mh	310	290.00 /ea	1,450	-	-	-	-	-	-	1,760	1,884
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.56 mnth	-	-	-	-	-	-	8,500.00 /mnth	13,260	3,500.00 /mnth	5,460	18,720	18,985
	John Deere 624 Loader (172 HP) (M)	1900.132	1.56 mnth	-	-	-	-	-	-	5,500.00 /mnth	8,580	3,000.00 /mnth	4,680	13,260	13,432
	Water Truck, 4,000 Gallon (L)	1900.210	1.56 mnth	-	-	-	-	-	-	4,500.00 /mnth	7,020	1,200.00 /mnth	1,872	8,892	9,032
	Mikasa Jumping Jack Compactor (L)	1900.138	1.56 mnth	-	-	-	-	-	-	200.00 /mnth	312	100.00 /mnth	156	468	474
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.56 mnth	-	-	-	-	-	-	2,000.00 /mnth	3,120	300.00 /mnth	468	3,588	3,650
	Tracer Wire	2333.080	1,400.00 lf	31.00 /mh	434	0.25 /lf	385	-	-	-	-	-	-	819	993
	Warning Tape Detectable	2333.080	1,370.00 lf	31.00 /mh	425	0.07 /lf	96	-	-	-	-	-	-	521	690
	Polybag 12" and Smaller	2333.090	300.00 lf	31.00 /mh	93	0.75 /lf	248	-	-	-	-	-	-	341	378

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-2	4" NON POTABLE WATER W3														
	Pot Hole Existing	2333.010	6.00 ea	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Cross Existing	2333.010	4.00 ea	31.00 /mh	248	100.00 /ea	400	-	-	-	-	-	-	648	747
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Tracer Wire Test Box	2333.080	5.00 ea	31.00 /mh	620	95.00 /ea	475	-	-	-	-	-	-	1,095	1,343
	Valve - Gate 4"	2519.110	10.00 ea	31.00 /mh	620	960.00 /ea	9,600	-	-	-	-	-	-	10,220	10,468
	Valve Box Assembly 6' Bury	2519.130	10.00 ea	31.00 /mh	930	330.00 /ea	3,300	-	-	-	-	-	-	4,230	4,602
	Conc Block for Valve	2519.100	10.00 ea	31.00 /mh	155	50.00 /ea	500	-	-	-	-	-	-	655	717
	Conc Pad for Valve Box	2519.100	10.00 ea	31.00 /mh	1,240	50.00 /ea	500	-	-	-	-	-	-	1,740	2,236
	Valve Stem Extension	2519.100	10.00 ea	31.00 /mh	310	130.00 /ea	1,300	-	-	-	-	-	-	1,610	1,734
	Valve - Marker Post [carsonite]	2519.100	10.00 ea	31.00 /mh	310	40.00 /ea	400	-	-	-	-	-	-	710	834
	PVC Sch-80 Pipe 1-1/2 Bell End	2336.110	80.00 lf	31.00 /mh	397	3.50 /lf	280	-	-	-	-	-	-	677	836
	PVC Sch 80 Tee 1-1/2 SOC	2336.160	3.00 ea	31.00 /mh	17	13.00 /ea	39	-	-	-	-	-	-	56	62
	DI RJ Compact Cap 4	2511.510	1.00 ea	31.00 /mh	31	148.00 /ea	148	-	-	-	-	-	-	179	191
	4 Bell Restrainer F/C900	2336.380	66.00 ea	31.00 /mh	2,046	70.00 /ea	4,620	-	-	-	-	-	-	6,666	7,484
	DI RJ Compact Cap 4	2511.510	9.00 ea	31.00 /mh	279	148.00 /ea	1,332	-	-	-	-	-	-	1,611	1,723
	Yard Hydrant	2510.200	8.00 ea	31.00 /mh	1,488	1,100.00 /ea	8,800	-	-	-	-	-	-	10,288	10,883
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh		35.00 /qt	39	-	-	-	-	-	-	39	39
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh		45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 TEE 1.5" S	15211.211	5.00 ea	31.00 /mh	33	10.20 /ea	51	-	-	-	-	-	-	84	97
	Copper Pipe Type K 3/4	2517.101	50.00 lf	31.00 /mh	233	8.00 /lf	440	-	-	-	-	-	-	673	766
	Wrot Adapter FtgxM 3/4	15231.060	16.00 ea	31.00 /mh	496	25.00 /ea	400	-	-	-	-	-	-	896	1,094
	Valve Special 1-1/2in - Solenoid	15110.003	1.00 ea	31.00 /mh	124	900.00 /ea	900	-	-	-	-	-	-	1,024	1,074
	PVC Sch 80 3/8"xMPT Spray nozzle	15211.202	3.00 ea	31.00 /mh	186	15.00 /ea	45	-	-	-	-	-	-	231	305
	PVC Sch 80 BUSH 1X3/8" SPGXT	15211.231	3.00 ea	31.00 /mh	20	8.00 /ea	24	-	-	-	-	-	-	44	51
	PVC Sch 80 BUSH 1.5X1" SPGXS	15211.230	3.00 ea	31.00 /mh	20	8.00 /ea	24	-	-	-	-	-	-	44	51
	1.5" Yard Hydrant	2510.200	1.00 ea	31.00 /mh	186	1,100.00 /ea	1,100	-	-	-	-	-	-	1,286	1,360
	4" NON POTABLE WATER W3		1,370.00 lf		36,531		75,804	/lf			32,392		12,636	157,362	172,622
02605-2	4" WAS from EXISTING DIGESTER														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	400.00 lf	31.00 /mh	1,860	-	-	-	-	-	-	-	-	1,860	2,604
	Trench Backfill 6- 8'	2333.020	400.00 lf	31.00 /mh	2,480	-	-	-	-	-	-	-	-	2,480	3,472
	Utility Bedding Peastone	2305.200	111.11 cy	-	-	24.00 /ton	4,267	-	-	-	-	-	-	4,267	4,267
	Spoils to Waste	2333.060	111.11 cy	31.00 /mh	344	-	-	-	-	-	-	-	-	344	482
	PVC C-900 Pipe 4 DR25	2336.310	400.00 lf	31.00 /mh	1,116	7.00 /lf	3,080	-	-	-	-	-	-	4,196	4,642
	DI RJ Compact 90 4	2511.514	2.00 ea	31.00 /mh	62	300.00 /ea	600	-	-	-	-	-	-	662	687
	DI RJ Compact 45 4	2511.514	5.00 ea	31.00 /mh	155	280.00 /ea	1,400	-	-	-	-	-	-	1,555	1,617
	DI RJ Compact Wye 4	2511.528	3.00 ea	31.00 /mh	186	506.00 /ea	1,518	-	-	-	-	-	-	1,704	1,778
	DI RJ Compact Solid Sleeve Short 4	2511.523	8.00 ea	31.00 /mh	248	290.00 /ea	2,320	-	-	-	-	-	-	2,568	2,667
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.52 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,420	3,500.00 /mnth	1,820	6,240	6,328
	John Deere 624 Loader (172 HP) (M)	1900.132	0.52 mnth	-	-	-	-	-	-	5,500.00 /mnth	2,860	3,000.00 /mnth	1,560	4,420	4,477
	Water Truck, 4,000 Gallon (L)	1900.210	0.52 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,340	1,200.00 /mnth	624	2,964	3,011
	Mikasa Jumping Jack Compactor (L)	1900.138	0.52 mnth	-	-	-	-	-	-	200.00 /mnth	104	100.00 /mnth	52	156	158
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.52 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,040	300.00 /mnth	156	1,196	1,217
	Tracer Wire	2333.080	420.00 lf	31.00 /mh	130	0.25 /lf	116	-	-	-	-	-	-	246	298
	Warning Tape Detectable	2333.080	400.00 lf	31.00 /mh	124	0.07 /lf	28	-	-	-	-	-	-	152	202
	Polybag 12" and Smaller	2333.090	100.00 lf	31.00 /mh	31	0.75 /lf	83	-	-	-	-	-	-	114	126
	Pot Hole Existing	2333.010	8.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Cross Existing	2333.010	2.00 ea	31.00 /mh	124	100.00 /ea	200	-	-	-	-	-	-	324	374
	Cut Existing	2333.010	6.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Tie to Existing	2333.010	6.00 ea	31.00 /mh	372	50.00 /ea	300	-	-	-	-	-	-	672	821
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	248	95.00 /ea	190	-	-	-	-	-	-	438	537
	Valve - Plug MJ 4"	2519.160	2.00 ea	31.00 /mh	124	1,320.00 /ea	2,640	-	-	-	-	-	-	2,764	2,814
	Valve Box Assembly 6' Bury	2519.130	2.00 ea	31.00 /mh	186	330.00 /ea	660	-	-	-	-	-	-	846	920
	Valve Box 2' Extension	2519.130	2.00 ea	31.00 /mh	31	90.00 /ea	180	-	-	-	-	-	-	211	223
	Conc Block for Valve	2519.100	2.00 ea	31.00 /mh	62	50.00 /ea	100	-	-	-	-	-	-	162	187
	Conc Pad for Valve Box	2519.100	2.00 ea	31.00 /mh	248	50.00 /ea	100	-	-	-	-	-	-	348	447
	Valve Stem Extension	2519.100	2.00 ea	31.00 /mh	62	130.00 /ea	260	-	-	-	-	-	-	322	347
	Valve - Marker Post [carsonite]	2519.100	2.00 ea	31.00 /mh	62	40.00 /ea	80	-	-	-	-	-	-	142	167
	4 Bell Restrainer F/C900	2336.380	19.00 ea	31.00 /mh	589	70.00 /ea	1,330	-	-	-	-	-	-	1,919	2,155
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	186	750.00 /ea	1,500	-	-	-	-	-	-	1,686	1,760
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	62	75.00 /ea	150	-	-	-	-	-	-	212	237
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	2.00 ea	31.00 /mh	62	300.00 /ea	600	-	-	-	-	-	-	662	687
	DI RJ Compact Cap 4	2511.510	1.00 ea	31.00 /mh	31	148.00 /ea	148	-	-	-	-	-	-	179	191
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	2.00 ea	31.00 /mh	248	125.00 /ea	250	-	-	-	-	-	-	498	597
	Conc Pad for Valve Box	2519.100	2.00 ea	31.00 /mh	248	50.00 /ea	100	-	-	-	-	-	-	348	447
	3500 psi Thrust Block Concrete	3310.105	2.00 cy	31.00 /mh	248	165.00 /cy	347	-	-	-	-	-	-	595	694
	4" WAS from EXISTING DIGESTER		400.00 lf		11,542		22,595	/lf			10,814		4,212	49,163	53,996
02605-2	4" ADMIN DRAIN D														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	140.00 lf	31.00 /mh	651	-	-	-	-	-	-	-	-	651	911

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 4" ADMIN DRAIN D														
	Trench Backfill 6- 8'	2333.020	140.00 lf	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Utility Bedding Peastone	2305.200	38.89 cy	-	-	24.00 /ton	1,493	-	-	-	-	-	-	1,493	1,493
	Spoils to Waste	2333.060	38.89 cy	31.00 /mh	121	-	-	-	-	-	-	-	-	121	169
	PVC C-900 Pipe 4	2336.310	140.00 lf	31.00 /mh	391	7.00 /lf	1,078	-	-	-	-	-	-	1,469	1,625
	DI RJ Compact 90 4	2511.514	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI RJ Compact 45 4	2511.514	1.00 ea	31.00 /mh	31	280.00 /ea	280	-	-	-	-	-	-	311	323
	DI RJ Compact Wye 4	2511.528	4.00 ea	31.00 /mh	248	506.00 /ea	2,024	-	-	-	-	-	-	2,272	2,371
	DI RJ Compact Solid Sleeve Short 4	2511.523	1.00 ea	31.00 /mh	31	290.00 /ea	290	-	-	-	-	-	-	321	333
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Tracer Wire	2333.080	160.00 lf	31.00 /mh	50	0.25 /lf	44	-	-	-	-	-	-	94	113
	Warning Tape Detectable	2333.080	140.00 lf	31.00 /mh	43	0.07 /lf	10	-	-	-	-	-	-	53	71
	Polybag 12" and Smaller	2333.090	20.00 lf	31.00 /mh	6	0.75 /lf	17	-	-	-	-	-	-	23	25
	Pot Hole Existing	2333.010	2.00 ea	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Cross Existing	2333.010	1.00 ea	31.00 /mh	62	100.00 /ea	100	-	-	-	-	-	-	162	187
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	Conc Pad for Valve Box	2519.100	3.00 ea	31.00 /mh	372	50.00 /ea	150	-	-	-	-	-	-	522	671
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	3.00 ea	31.00 /mh	279	750.00 /ea	2,250	-	-	-	-	-	-	2,529	2,641
	DI Blind Flange 4"	15221.405	3.00 ea	31.00 /mh	93	75.00 /ea	225	-	-	-	-	-	-	318	355
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	3.00 ea	31.00 /mh	93	300.00 /ea	900	-	-	-	-	-	-	993	1,030
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	3.00 ea	31.00 /mh	372	125.00 /ea	375	-	-	-	-	-	-	747	896
	4 Bell Restrainer F/C900	2336.380	6.00 ea	31.00 /mh	186	70.00 /ea	420	-	-	-	-	-	-	606	680
	Link Seal Size LS-300-S	15123.100	10.00 ea	31.00 /mh	47	6.00 /ea	60	-	-	-	-	-	-	107	125
	Core Drilled Hole - 6 -*	15122.100	1.00 ea	31.00 /mh	31	200.00 /ea	200	150.00 /ea	150	-	-	-	-	381	393
	4" ADMIN DRAIN D		140.00 lf		4,563		10,456	1.07 /lf	150		3,569		1,377	20,115	22,011
	02605-2 4" HEADWORKS DRAIN D														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	140.00 lf	31.00 /mh	651	-	-	-	-	-	-	-	-	651	911
	Trench Backfill 6- 8'	2333.020	140.00 lf	31.00 /mh	868	-	-	-	-	-	-	-	-	868	1,215
	Utility Bedding Peastone	2305.200	38.89 cy	-	-	24.00 /ton	1,493	-	-	-	-	-	-	1,493	1,493
	Spoils to Waste	2333.060	38.89 cy	31.00 /mh	121	-	-	-	-	-	-	-	-	121	169
	PVC C-900 Pipe 4	2336.310	140.00 lf	31.00 /mh	434	7.00 /lf	1,078	-	-	-	-	-	-	1,512	1,686
	DI RJ Compact 90 4	2511.514	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI RJ Compact 45 4	2511.514	2.00 ea	31.00 /mh	62	280.00 /ea	560	-	-	-	-	-	-	622	647
	DI RJ Compact Wye 4	2511.528	2.00 ea	31.00 /mh	124	506.00 /ea	1,012	-	-	-	-	-	-	1,136	1,186
	DI RJ Compact Solid Sleeve Short 4	2511.523	1.00 ea	31.00 /mh	31	290.00 /ea	290	-	-	-	-	-	-	321	333
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.17 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,445	3,500.00 /mnth	595	2,040	2,069
	John Deere 624 Loader (172 HP) (M)	1900.132	0.17 mnth	-	-	-	-	-	-	5,500.00 /mnth	935	3,000.00 /mnth	510	1,445	1,464
	Water Truck, 4,000 Gallon (L)	1900.210	0.17 mnth	-	-	-	-	-	-	4,500.00 /mnth	765	1,200.00 /mnth	204	969	984
	Mikasa Jumping Jack Compactor (L)	1900.138	0.17 mnth	-	-	-	-	-	-	200.00 /mnth	34	100.00 /mnth	17	51	52
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.17 mnth	-	-	-	-	-	-	2,000.00 /mnth	340	300.00 /mnth	51	391	398
	Tracer Wire	2333.080	160.00 lf	31.00 /mh	50	0.25 /lf	44	-	-	-	-	-	-	94	113
	Warning Tape Detectable	2333.080	140.00 lf	31.00 /mh	43	0.07 /lf	10	-	-	-	-	-	-	53	71
	Polybag 12" and Smaller	2333.090	50.00 lf	31.00 /mh	16	0.75 /lf	41	-	-	-	-	-	-	57	63
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cross Existing	2333.010	3.00 ea	31.00 /mh	372	100.00 /ea	300	-	-	-	-	-	-	672	821
	Tracer Wire Test Box	2333.080	2.00 ea	31.00 /mh	62	95.00 /ea	190	-	-	-	-	-	-	252	277
	Conc Block for Valve	2519.100	2.00 ea	31.00 /mh	62	50.00 /ea	100	-	-	-	-	-	-	162	187
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	186	750.00 /ea	1,500	-	-	-	-	-	-	1,686	1,760
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	62	75.00 /ea	150	-	-	-	-	-	-	212	237
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	2.00 ea	31.00 /mh	62	300.00 /ea	600	-	-	-	-	-	-	662	687
	DI RJ Compact Red 6x4	2511.520	1.00 ea	31.00 /mh	31	330.00 /ea	330	-	-	-	-	-	-	361	373
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	2.00 ea	31.00 /mh	248	125.00 /ea	250	-	-	-	-	-	-	498	597
	4 Bell Restrainer F/C900	2336.380	6.00 ea	31.00 /mh	186	70.00 /ea	420	-	-	-	-	-	-	606	680
	4" HEADWORKS DRAIN D		140.00 lf		4,321		8,718	/lf			3,569		1,377	17,985	19,785
	02605-2 6" - 4" DIGESTER DECANT DEC														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 8-10'	2333.010	170.00 lf	31.00 /mh	1,054	-	-	-	-	-	-	-	-	1,054	1,476
	Trench Backfill 8-10'	2333.020	170.00 lf	31.00 /mh	1,318	-	-	-	-	-	-	-	-	1,318	1,845
	Utility Bedding Peastone	2305.200	44.44 cy	-	-	24.00 /ton	1,707	-	-	-	-	-	-	1,707	1,707
	Spoils to Waste	2333.060	44.44 cy	31.00 /mh	138	-	-	-	-	-	-	-	-	138	193
	PVC C-900 Pipe 6	2336.310	140.00 lf	31.00 /mh	434	13.00 /lf	2,002	-	-	-	-	-	-	2,436	2,610
	DI RJ Compact 90 6	2511.514	2.00 ea	31.00 /mh	62	425.00 /ea	850	-	-	-	-	-	-	912	937
	DI RJ Compact 45 6	2511.514	6.00 ea	31.00 /mh	186	400.00 /ea	2,400	-	-	-	-	-	-	2,586	2,660
	DI RJ Compact Wye 6	2511.528	1.00 ea	31.00 /mh	62	710.00 /ea	710	-	-	-	-	-	-	772	797
	DI RJ Compact Red 6x4	2511.520	2.00 ea	31.00 /mh	62	330.00 /ea	660	-	-	-	-	-	-	722	747

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-2	6" - 4" DIGESTER DECANT DEC														
	DI RJ Compact Solid Sleeve Short 6	2511.523	3.00 ea	31.00 /mh	93	440.00 /ea	1,320	-	-	-	-	-	-	1,413	1,450
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.34 mnth	-	-	-	-	-	-	8,500.00 /mnth	2,890	3,500.00 /mnth	1,190	4,080	4,138
	John Deere 624 Loader (172 HP) (M)	1900.132	0.34 mnth	-	-	-	-	-	-	5,500.00 /mnth	1,870	3,000.00 /mnth	1,020	2,890	2,927
	Water Truck, 4,000 Gallon (L)	1900.210	0.34 mnth	-	-	-	-	-	-	4,500.00 /mnth	1,530	1,200.00 /mnth	408	1,938	1,969
	Mikasa Jumping Jack Compactor (L)	1900.138	0.34 mnth	-	-	-	-	-	-	200.00 /mnth	68	100.00 /mnth	34	102	103
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.34 mnth	-	-	-	-	-	-	2,000.00 /mnth	680	300.00 /mnth	102	782	796
	Tracer Wire	2333.080	180.00 lf	31.00 /mh	56	0.25 /lf	50	-	-	-	-	-	-	105	128
	Warning Tape Detectable	2333.080	160.00 lf	31.00 /mh	50	0.07 /lf	11	-	-	-	-	-	-	61	81
	3500 psi Thrust Block Concrete	3310.105	2.00 cy	31.00 /mh	248	165.00 /cy	347	-	-	-	-	-	-	595	694
	Polybag 12" and Smaller	2333.090	60.00 lf	31.00 /mh	19	0.75 /lf	50	-	-	-	-	-	-	68	76
	Pot Hole Existing	2333.010	1.00 ea	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Cut Existing	2333.010	1.00 ea	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Tracer Wire Test Box	2333.080	3.00 ea	31.00 /mh	93	95.00 /ea	285	-	-	-	-	-	-	378	415
	Conc Pad for Valve Box	2519.100	1.00 ea	31.00 /mh	124	50.00 /ea	50	-	-	-	-	-	-	174	224
	DI RJ Compact Wye 6x4	2511.528	3.00 ea	31.00 /mh	186	620.00 /ea	1,860	-	-	-	-	-	-	2,046	2,120
	6 Bell Restrainer F/C900	2336.380	3.00 ea	31.00 /mh	93	90.00 /ea	270	-	-	-	-	-	-	363	400
	DI Pipe 6in. dia FxPE - 5ft. 0in.	15221.030	4.00 ea	31.00 /mh	248	600.00 /ea	2,400	-	-	-	-	-	-	2,648	2,747
	NBG Kit 125# SS 6in [316SS & 1/8" EPDM]	15125.012	4.00 ea	31.00 /mh	124	350.00 /ea	1,400	-	-	-	-	-	-	1,524	1,574
	PVC C-900 Pipe 4	2336.310	30.00 lf	31.00 /mh	930	7.00 /lf	231	-	-	-	-	-	-	1,161	1,533
	DI RJ Compact Wye 4	2511.528	1.00 ea	31.00 /mh	62	506.00 /ea	506	-	-	-	-	-	-	568	593
	DI RJ Compact 45 4	2511.514	2.00 ea	31.00 /mh	62	280.00 /ea	560	-	-	-	-	-	-	622	647
	DI RJ Compact Solid Sleeve Long 4	2511.522	1.00 ea	31.00 /mh	31	290.00 /ea	290	-	-	-	-	-	-	321	333
	DI RJ Compact Cap 4	2511.510	1.00 ea	31.00 /mh	31	148.00 /ea	148	-	-	-	-	-	-	179	191
	4 Bell Restrainer F/C900	2336.380	6.00 ea	31.00 /mh	186	70.00 /ea	420	-	-	-	-	-	-	606	680
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	93	750.00 /ea	750	-	-	-	-	-	-	843	880
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	NBG Kit 125# SS 4in [316SS & 1/8" EPDM]	15125.012	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	Cleanout Frame and Cover Cast Iron w/ 12" Clear ID	2327.120	1.00 ea	31.00 /mh	124	125.00 /ea	125	-	-	-	-	-	-	249	299
	Valve Plug Flange 125# 6in Electric Actuated	15110.650	2.00 ea	31.00 /mh	372	7,280.00 /ea	14,560	-	-	-	-	-	-	14,932	15,081
	Instrument - Analyzer - Suspended Solids -	17100.000	2.00 ea	31.00 /mh	248	500.00 /ea	1,000	-	-	-	-	-	-	1,248	1,347
	6" - 4" DIGESTER DECANT DEC		160.00 lf		7,593		35,485	/lf			7,138		2,754	52,971	56,151
0330 4-	Encase Pipe Crossings at Water Line														
	Formwork Pipe Encasement	3100.108	68.00 sf	31.00 /mh	527	1.50 /sf	107	-	-	-	-	-	-	634	845
	Place Pipe Encasement	3310.195	6.00 cy	31.00 /mh	199	166.00 /cy	1,066	-	-	-	-	-	-	1,265	1,344
	Nails and Hardware	3150.200	68.00 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	10.00 ea	31.00 /mh	62	5.00 /ea	50	-	-	-	-	-	-	112	137
	Pipe Tie Downs (Small)	3150.200	5.00 ea	31.00 /mh	620	75.00 /ea	375	-	-	-	-	-	-	995	1,243
	Dimension Lumber	3150.200	68.00 sf	31.00 /mh	0	0.50 /sf	34	-	-	-	-	-	-	34	34
	Oil SOG Form	3100.310	68.00 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Finish- Rough	3350.110	30.00 sf	31.00 /mh	8	0.01 /sf	0	-	-	-	-	-	-	9	12
	Liquid Curing Compounds	3390.170	30.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	4
	Encase Pipe Crossings at Water Line		2.17 CY		1,418		1,638	/CY			238,268		76,806	3,056	3,624
	PVC C900				228,838		1,002,266		34,700		238,268		76,806	1,580,879	1,677,180
PVC30	SCH80														
02610-	2"-1.5" POTABLE WATER W1														
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	31.00 /mh	744	50.00 /ea	150	-	-	50.00 /ea	150	-	-	1,044	1,345
	Trench Excavtion 6- 8'	2333.010	520.00 lf	31.00 /mh	2,418	-	-	-	-	-	-	-	-	2,418	3,385
	Trench Backfill 6- 8'	2333.020	520.00 lf	31.00 /mh	3,224	-	-	-	-	-	-	-	-	3,224	4,514
	Utility Bedding Peastone	2305.200	96.30 cy	-	-	24.00 /ton	3,698	-	-	-	-	-	-	3,698	3,698
	Spoils to Waste	2333.060	96.30 cy	31.00 /mh	299	-	-	-	-	-	-	-	-	299	418
	PVC Sch 80 Pipe 2 Bell End	2336.110	290.00 lf	31.00 /mh	899	4.00 /lf	1,276	-	-	-	-	-	-	2,175	2,535
	PVC Sch 80 90 ell 2 SOC	2336.120	3.00 ea	31.00 /mh	15	6.00 /ea	18	-	-	-	-	-	-	33	39
	PVC Sch 80 45 bend 2 SOC	2336.120	3.00 ea	31.00 /mh	15	12.00 /ea	36	-	-	-	-	-	-	51	57
	PVC Sch 80 Tee 3/8 SOC	2336.160	1.00 ea	31.00 /mh	8	4.00 /ea	4	-	-	-	-	-	-	12	15
	PVC Sch 80 Wye 2 x 2 SOC	2336.170	1.00 ea	31.00 /mh	5	29.00 /ea	29	-	-	-	-	-	-	34	36
	PVC Sch 80 Coupling Reducer 2 x 1-1/2 SOC x SOC	2336.190	1.00 ea	31.00 /mh	5	10.00 /ea	10	-	-	-	-	-	-	15	17
	PVC Sch 80 Coupling 2" SOC	2336.180	10.00 ea	31.00 /mh	50	6.00 /ea	60	-	-	-	-	-	-	110	129
	PVC Sch 80 Caps 2 SOC	2336.130	3.00 ea	31.00 /mh	15	10.00 /ea	30	-	-	-	-	-	-	45	51
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.56 mnth	-	-	-	-	-	-	8,500.00 /mnth	4,760	3,500.00 /mnth	1,960	6,720	6,815
	John Deere 624 Loader (172 HP) (M)	1900.132	0.56 mnth	-	-	-	-	-	-	5,500.00 /mnth	3,080	3,000.00 /mnth	1,680	4,760	4,822
	Water Truck, 4,000 Gallon (L)	1900.210	0.56 mnth	-	-	-	-	-	-	4,500.00 /mnth	2,520	1,200.00 /mnth	672	3,192	3,242
	Mikasa Jumping Jack Compactor (L)	1900.138	0.56 mnth	-	-	-	-	-	-	200.00 /mnth	112	100.00 /mnth	56	168	170
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.56 mnth	-	-	-	-	-	-	2,000.00 /mnth	1,120	300.00 /mnth	168	1,288	1,310
	Pot Hole Existing	2333.010	3.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Cross Existing	2333.010	3.00 ea	31.00 /mh	186	100.00 /ea	300	-	-	-	-	-	-	486	560
	Tie to Existing	2333.010	1.00 ea	31.00 /mh	62	50.00 /ea	50	-	-	-	-	-	-	112	137
	Warning Tape Detectable	2333.080	520.00 lf	31.00 /mh	161	0.07 /lf	36	-	-	-	-	-	-	198	262
	Tracer Wire	2333.080	520.00 lf	31.00 /mh	161	0.25 /lf	143	-	-	-	-	-	-	304	369
	Tracer Wire Test Box	2333.080	3.00 ea	31.00 /mh	93	95.00 /ea	285	-	-	-	-	-	-	378	415

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02610- 2"-1.5" POTABLE WATER W1														
	Disinfection/Chlorination of PW (Enter Line Size)	1166.100	3.00 ea	31.00 /mh	744	50.00 /ea	150	-	-	-	-	-	-	894	1,192
	Valve - Gate 2"	2519.110	5.00 ea	31.00 /mh	310	500.00 /ea	2,500	-	-	-	-	-	-	2,810	2,934
	Valve Box Assembly 6' Bury	2519.130	5.00 ea	31.00 /mh	465	330.00 /ea	1,650	-	-	-	-	-	-	2,115	2,301
	Valve Box 2' Extension	2519.130	5.00 ea	31.00 /mh	78	90.00 /ea	450	-	-	-	-	-	-	528	559
	Conc Block for Valve	2519.100	5.00 ea	31.00 /mh	78	50.00 /ea	250	-	-	-	-	-	-	328	358
	Conc Pad for Valve Box	2519.100	5.00 ea	31.00 /mh	620	50.00 /ea	250	-	-	-	-	-	-	870	1,118
	Valve Stem Extension	2519.100	5.00 ea	31.00 /mh	155	130.00 /ea	650	-	-	-	-	-	-	805	867
	Valve - Marker Post [carsonite]	2519.100	5.00 ea	31.00 /mh	155	40.00 /ea	200	-	-	-	-	-	-	355	417
	PVC Sch-80 Pipe 1-1/2 Bell End	2336.110	230.00 lf	31.00 /mh	1,141	3.50 /lf	805	-	-	-	-	-	-	1,946	2,402
	PVC Sch-80 45 Bend 1-1/2 SOC	2336.120	2.00 ea	31.00 /mh	10	10.00 /ea	20	-	-	-	-	-	-	30	34
	PVC Sch 80 90 ell 1-1/2 SOC	2336.120	2.00 ea	31.00 /mh	10	5.00 /ea	10	-	-	-	-	-	-	20	24
	PVC Sch 80 Coupling 1-1/2" SOC	2336.180	5.00 ea	31.00 /mh	25	6.00 /ea	30	-	-	-	-	-	-	55	65
	PVC Sch 80 Cement	15211.201	5.00 qt	31.00 /mh	-	45.00 /qt	248	-	-	-	-	-	-	248	248
	PVC Sch 80 Primer	15211.201	5.00 qt	31.00 /mh	-	35.00 /qt	193	-	-	-	-	-	-	193	193
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	10.00 ea	31.00 /mh	65	9.90 /ea	99	-	-	-	-	-	-	164	190
	Water Tap Saddle 6 x 2"	2519.424	1.00 ea	31.00 /mh	62	80.00 /ea	80	-	-	-	-	-	-	142	167
	2"-1.5" POTABLE WATER W1		520.00 lf		12,647		13,709	/lf			11,742		4,536	42,635	47,928
	02610- 6" ROOF DRAIN HEADWORKS														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 0- 4'	2333.010	40.00 lf	31.00 /mh	99	-	-	-	-	-	-	-	-	99	139
	Trench Backfill 0- 4'	2333.020	40.00 lf	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Utility Bedding Peastone	2305.200	11.11 cy	-	-	24.00 /to n	427	-	-	-	-	-	-	427	427
	Spoils to Waste	2333.060	11.11 cy	31.00 /mh	34	-	-	-	-	-	-	-	-	34	48
	PVC Sch 80 Pipe 6 Bell End	2336.110	40.00 lf	31.00 /mh	198	28.00 /lf	1,232	-	-	-	-	-	-	1,430	1,510
	PVC Sch 80 90 ell 6 SOC	2336.120	1.00 ea	31.00 /mh	6	55.00 /ea	55	-	-	-	-	-	-	61	63
	PVC Sch 80 Coupling 6" SOC	2336.180	1.00 ea	31.00 /mh	6	43.00 /ea	43	-	-	-	-	-	-	49	51
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	340	3,500.00 /mnth	140	480	487
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 mnth	-	-	-	-	-	-	5,500.00 /mnth	220	3,000.00 /mnth	120	340	344
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 mnth	-	-	-	-	-	-	4,500.00 /mnth	180	1,200.00 /mnth	48	228	232
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 mnth	-	-	-	-	-	-	200.00 /mnth	8	100.00 /mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 mnth	-	-	-	-	-	-	2,000.00 /mnth	80	300.00 /mnth	12	92	94
	Import Rip Rap - Type L (D50 = 9")	2305.450	1.00 cy	-	-	55.00 /to n	91	-	-	-	-	-	-	91	91
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh	-	45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh	-	35.00 /qt	39	-	-	-	-	-	-	39	39
	PVC Sch 80 Coupling Reducer 6 x 4 SOC x SOC	2336.190	1.00 ea	31.00 /mh	6	93.00 /ea	93	-	-	-	-	-	-	99	101
	6" ROOF DRAIN HEADWORKS		40.00 lf		721		2,078	/lf			878		324	4,001	4,307
	02610- 6" UV ROOF DRAIN														
	Trench Excavtion 0- 4'	2333.010	35.00 lf	31.00 /mh	130	-	-	-	-	-	-	-	-	130	182
	Trench Backfill 0- 4'	2333.020	35.00 lf	31.00 /mh	163	-	-	-	-	-	-	-	-	163	228
	Utility Bedding Peastone	2305.200	8.10 cy	-	-	24.00 /to n	311	-	-	-	-	-	-	311	311
	Spoils to Waste	2333.060	8.10 cy	31.00 /mh	25	-	-	-	-	-	-	-	-	25	35
	PVC Sch 80 Pipe 6 Bell End	2336.110	35.00 lf	31.00 /mh	174	28.00 /lf	1,078	-	-	-	-	-	-	1,252	1,321
	PVC Sch 80 90 ell 6 SOC	2336.120	4.00 ea	31.00 /mh	22	55.00 /ea	220	-	-	-	-	-	-	242	251
	PVC Sch 80 Coupling Reducer 6 x 4 SOC x SOC	2336.190	4.00 ea	31.00 /mh	22	93.00 /ea	372	-	-	-	-	-	-	394	403
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	340	3,500.00 /mnth	140	480	487
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 mnth	-	-	-	-	-	-	5,500.00 /mnth	220	3,000.00 /mnth	120	340	344
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 mnth	-	-	-	-	-	-	4,500.00 /mnth	180	1,200.00 /mnth	48	228	232
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 mnth	-	-	-	-	-	-	200.00 /mnth	8	100.00 /mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 mnth	-	-	-	-	-	-	2,000.00 /mnth	80	300.00 /mnth	12	92	94
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh	-	45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh	-	35.00 /qt	39	-	-	-	-	-	-	39	39
	Import Rip Rap - Type L (D50 = 9")	2305.450	4.00 cy	-	-	55.00 /to n	363	-	-	-	-	-	-	363	363
	Rip Rap Hand Place Loose	2305.450	16.00 sf	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	6" UV ROOF DRAIN		35.00 lf		784		2,432	/lf			828		324	4,368	4,699
	PVC80 SCH80				14,152		18,220				13,448		5,184	51,004	56,934
	052 Yard Piping				316,966		1,397,959	/LS	58,460		318,468		106,424	2,198,277	2,331,432
	100 Headworks														
	CML Ductile Iron														
	0330 4- Encase 14" ABI to Anoxic														
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	147.76 sf	31.00 /mh	1,145	1.50 /sf	233	-	-	-	-	-	-	1,378	1,836
	Place Pipe Encasement	3310.195	8.00 cy	31.00 /mh	265	166.00 /cy	1,421	-	-	-	-	-	-	1,686	1,792
	Nails and Hardware	3150.200	147.76 sf	31.00 /mh	0	0.04 /sf	6	-	-	-	-	-	-	6	6
	Form Ties Specialty	3150.632	15.00 ea	31.00 /mh	93	5.00 /ea	75	-	-	-	-	-	-	168	205
	Pipe Tie Downs (Medium)	3150.200	6.00 ea	31.00 /mh	930	150.00 /ea	900	-	-	-	-	-	-	1,830	2,202
	Dimension Lumber	3150.200	147.76 sf	31.00 /mh	0	0.50 /sf	74	-	-	-	-	-	-	74	74
	Oil SOG Form	3100.310	147.76 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- Encase 14" ABI to Anoxic														
	Finish- Rough	3350.110	66.75 sf	31.00 /mh	19	0.01 /sf	0	-	-	-	-	-	-	19	26
	Liquid Curing Compounds	3390.170	66.75 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	8	10
	Encasement Rebar	3210.104	0.30 tn	31.00 /mh	279	1,400.00 /tn	441	-	-	-	-	-	-	720	832
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	45	8.50 /lf	143	-	-	-	-	-	-	187	205
	Encase 14" ABI to Anoxic		8.00 CY		2,780		3,300	/CY						6,080	7,192
	0330 4- Encase 14" ABI to Anaerobic														
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	78.34 sf	31.00 /mh	607	1.50 /sf	123	-	-	-	-	-	-	731	973
	Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	843	896
	Nails and Hardware	3150.200	78.34 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	109
	Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	915	1,101
	Dimension Lumber	3150.200	78.34 sf	31.00 /mh	0	0.50 /sf	39	-	-	-	-	-	-	39	39
	Oil SOG Form	3100.310	78.34 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	32.04 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	9	13
	Liquid Curing Compounds	3390.170	32.04 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Encasement Rebar	3210.104	0.28 tn	31.00 /mh	260	1,400.00 /tn	412	-	-	-	-	-	-	672	776
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	45	8.50 /lf	143	-	-	-	-	-	-	187	205
	Encase 14" ABI to Anaerobic		4.00 CY		1,570		1,924	/CY						3,495	4,123
	0330 4- Encase 14" ABI to Orbal														
	Excavation - Mass	2317.105	42.00 cy	31.00 /mh	65	-	-	-	-	-	-	-	-	65	91
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	78.34 sf	31.00 /mh	607	1.50 /sf	123	-	-	-	-	-	-	731	973
	Place Pipe Encasement	3310.195	3.50 cy	31.00 /mh	116	166.00 /cy	622	-	-	-	-	-	-	738	784
	Nails and Hardware	3150.200	78.34 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	10.00 ea	31.00 /mh	62	5.00 /ea	50	-	-	-	-	-	-	112	137
	Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	915	1,101
	Dimension Lumber	3150.200	78.34 sf	31.00 /mh	0	0.50 /sf	39	-	-	-	-	-	-	39	39
	Oil SOG Form	3100.310	78.34 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	32.04 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	9	13
	Liquid Curing Compounds	3390.170	32.04 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Encasement Rebar	3210.104	0.13 tn	31.00 /mh	121	1,400.00 /tn	192	-	-	-	-	-	-	313	361
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	45	8.50 /lf	143	-	-	-	-	-	-	187	205
	Encase 14" ABI to Orbal		3.50 CY		1,492		1,626	/CY						3,118	3,714
	0330 4- Encase 14" ABI to Phase 5 Future														
	Excavation - Mass	2317.105	42.00 cy	31.00 /mh	65	-	-	-	-	-	-	-	-	65	91
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	78.34 sf	31.00 /mh	607	1.50 /sf	123	-	-	-	-	-	-	731	973
	Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	843	896
	Nails and Hardware	3150.200	78.34 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	109
	Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	915	1,101
	Dimension Lumber	3150.200	78.34 sf	31.00 /mh	0	0.50 /sf	39	-	-	-	-	-	-	39	39
	Oil SOG Form	3100.310	78.34 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	32.04 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	9	13
	Liquid Curing Compounds	3390.170	32.04 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Encasement Rebar	3210.104	0.13 tn	31.00 /mh	121	1,400.00 /tn	192	-	-	-	-	-	-	313	361
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	45	8.50 /lf	143	-	-	-	-	-	-	187	205
	DI Pipe RJ - Class 250 14	2511.401	13.00 lf	31.00 /mh	403	80.00 /lf	1,144	-	-	-	-	-	-	1,547	1,708
	DI RJ Compact 90 14	2511.514	1.00 ea	31.00 /mh	62	1,660.00 /ea	1,660	-	-	-	-	-	-	1,722	1,747
	DI RJ Compact Cap 14	2511.510	2.00 ea	31.00 /mh	124	710.00 /ea	1,420	-	-	-	-	-	-	1,544	1,594
	Encase 14" ABI to Phase 5 Future		4.00 CY		2,085		5,928	/CY						8,013	8,848
	0330 4- Encase 14" ABI to Phase 4 Future														
	Excavation - Mass	2317.105	42.00 cy	31.00 /mh	65	-	-	-	-	-	-	-	-	65	91
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	78.34 sf	31.00 /mh	607	1.50 /sf	123	-	-	-	-	-	-	731	973
	Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	843	896
	Nails and Hardware	3150.200	78.34 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	109
	Pipe Tie Downs (Medium)	3150.200	4.00 ea	31.00 /mh	620	150.00 /ea	600	-	-	-	-	-	-	1,220	1,468
	Dimension Lumber	3150.200	78.34 sf	31.00 /mh	0	0.50 /sf	39	-	-	-	-	-	-	39	39
	Oil SOG Form	3100.310	78.34 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	32.04 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	9	13
	Liquid Curing Compounds	3390.170	32.04 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Encasement Rebar	3210.104	0.13 tn	31.00 /mh	121	1,400.00 /tn	192	-	-	-	-	-	-	313	361
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	192	212
	DI Pipe RJ - Class 250 14	2511.401	13.00 lf	31.00 /mh	403	80.00 /lf	1,144	-	-	-	-	-	-	1,547	1,708
	DI RJ Compact 90 14	2511.514	1.00 ea	31.00 /mh	62	1,660.00 /ea	1,660	-	-	-	-	-	-	1,722	1,747
	DI RJ Compact Cap 14	2511.510	1.00 ea	31.00 /mh	62	710.00 /ea	710	-	-	-	-	-	-	772	797
	Encase 14" ABI to Phase 4 Future		4.00 CY		2,183		5,368	/CY						7,551	8,425
	0330 4- Encase 14" ABI to Phase 4 Future (Diagonal Line)														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- Encase 14" ABI to Phase 4 Future (Diagonal Line)														
	Excavation - Mass	2317.105	76.00 cy	31.00 /mh	118	-	-	-	-	-	-	-	-	118	165
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	126.40 sf	31.00 /mh	980	1.50 /sf	199	-	-	-	-	-	-	1,179	1,570
	Place Pipe Encasement	3310.195	6.00 cy	31.00 /mh	199	166.00 /cy	1,066	-	-	-	-	-	-	1,265	1,344
	Nails and Hardware	3150.200	126.40 sf	31.00 /mh	0	0.04 /sf	5	-	-	-	-	-	-	5	5
	Form Ties Specialty	3150.632	13.00 ea	31.00 /mh	81	5.00 /ea	65	-	-	-	-	-	-	146	178
	Pipe Tie Downs (Medium)	3150.200	5.00 ea	31.00 /mh	775	150.00 /ea	750	-	-	-	-	-	-	1,525	1,835
	Dimension Lumber	3150.200	126.40 sf	31.00 /mh	0	0.50 /sf	63	-	-	-	-	-	-	63	63
	Oil SOG Form	3100.310	126.40 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3
	Finish- Rough	3350.110	56.07 sf	31.00 /mh	16	0.01 /sf	0	-	-	-	-	-	-	16	22
	Liquid Curing Compounds	3390.170	56.07 sf	31.00 /mh	3	0.06 /sf	3	-	-	-	-	-	-	7	8
	Pipe Encasement Rebar	3200.980	0.23 tn	31.00 /mh	215	1,400.00 /tn	323	-	-	-	-	-	-	538	624
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	192	212
	DI Pipe RJ - Class 250 14	2511.401	20.00 lf	31.00 /mh	372	80.00 /lf	1,760	-	-	-	-	-	-	2,132	2,281
	DI RJ Compact 90 14	2511.514	1.00 ea	31.00 /mh	62	1,660.00 /ea	1,660	-	-	-	-	-	-	1,722	1,747
	DI RJ Compact Cap 14	2511.510	1.00 ea	31.00 /mh	62	710.00 /ea	710	-	-	-	-	-	-	772	797
	Encase 14" ABI to Phase 4 Future (Diagonal Line)		6.00 CY		2,932		6,751	/CY						9,682	10,855
	CML Ductile Iron				13,042		24,897							37,939	43,156
GEN	General														
	02643-1- 20" RS Influent Underslab														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	40.00 lf	31.00 /mh	186	-	-	-	-	-	-	-	-	186	260
	Trench Backfill 6- 8'	2333.020	40.00 lf	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Spoils to Waste	2333.060	37.04 cy	31.00 /mh	115	-	-	-	-	-	-	-	-	115	161
	DI Pipe RJ - Class 250 20 Epoxy Lined	2511.401	50.00 lf	31.00 /mh	341	165.00 /lf	9,075	-	-	-	-	-	-	9,416	9,552
	DI RJ Compact 90 20 Epoxy Lined	2511.514	1.00 ea	31.00 /mh	124	6,300.00 /ea	6,300	-	-	-	-	-	-	6,424	6,474
	Polybag 24" and smaller	2333.090	40.00 lf	31.00 /mh	12	1.40 /lf	62	-	-	-	-	-	-	74	79
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 mnth	-	-	-	-	-	-	8,500.00 /mnth	153	3,500.00 /mnth	63	216	219
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 mnth	-	-	-	-	-	-	5,500.00 /mnth	99	3,000.00 /mnth	54	153	155
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 mnth	-	-	-	-	-	-	4,500.00 /mnth	41	1,200.00 /mnth	11	51	52
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 mnth	-	-	-	-	-	-	200.00 /mnth	2	100.00 /mnth	1	3	3
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 mnth	-	-	-	-	-	-	2,000.00 /mnth	18	300.00 /mnth	3	21	21
	DI Floor Pipe FLG x MJ w/ Collar 20in x 3ft 0in long	15221.232	1.00 ea	31.00 /mh	186	6,300.00 /ea	6,300	-	-	-	-	-	-	6,486	6,560
	20" RS Influent Underslab		40.00 lf		1,460		21,787	/lf			362		131	23,741	24,332
	02643-1- 6" RS Underslab														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 6- 8'	2333.010	10.00 lf	31.00 /mh	47	-	-	-	-	-	-	-	-	47	65
	Trench Backfill 6- 8'	2333.020	10.00 lf	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Utility Bedding Peastone	2305.200	5.93 cy	-	-	24.00 /ton	228	-	-	-	-	-	-	228	228
	Spoils to Waste	2333.060	5.93 cy	31.00 /mh	18	-	-	-	-	-	-	-	-	18	26
	DI Pipe RJ - Class 350 6 Epoxy Lined	2511.401	15.00 lf	31.00 /mh	47	43.00 /lf	710	-	-	-	-	-	-	756	775
	DI RJ Compact 90 6 Epoxy Lined	2511.514	1.00 ea	31.00 /mh	62	685.00 /ea	685	-	-	-	-	-	-	747	772
	Polybag 12" and Smaller	2333.090	10.00 lf	31.00 /mh	3	0.75 /lf	8	-	-	-	-	-	-	11	13
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 mnth	-	-	-	-	-	-	8,500.00 /mnth	43	3,500.00 /mnth	18	60	61
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 mnth	-	-	-	-	-	-	5,500.00 /mnth	28	3,000.00 /mnth	15	43	43
	Water Truck, 4,000 Gallon (L)	1900.210	0.00 mnth	-	-	-	-	-	-	4,500.00 /mnth	9	1,200.00 /mnth	2	11	12
	Mikasa Jumping Jack Compactor (L)	1900.138	0.00 mnth	-	-	-	-	-	-	200.00 /mnth	0	100.00 /mnth	0	1	1
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.00 mnth	-	-	-	-	-	-	2,000.00 /mnth	4	300.00 /mnth	1	5	5
	DI Floor Pipe FLG x MJ w/ Collar 6in x 3ft 0in long	15221.232	1.00 ea	31.00 /mh	93	1,400.00 /ea	1,400	-	-	-	-	-	-	1,493	1,530
	6" RS Underslab		10.00 lf		579		3,080	/lf			133		36	3,829	4,063
	0330 4- 20" RS, Influent Underslab Encasement														
	Formwork Pipe Encasement	3100.108	192.00 sf	31.00 /mh	1,488	1.50 /sf	302	-	-	-	-	-	-	1,790	2,386
	Place Pipe Encasement	3310.195	16.00 cy	31.00 /mh	425	166.00 /cy	2,842	-	-	-	-	-	-	3,267	3,436
	Nails and Hardware	3150.200	192.00 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Form Ties Specialty	3150.632	12.00 ea	31.00 /mh	74	5.00 /ea	60	-	-	-	-	-	-	134	164
	Pipe Tie Downs (Small)	3150.200	6.00 ea	31.00 /mh	930	75.00 /ea	450	-	-	-	-	-	-	1,380	1,752
	Dimension Lumber	3150.200	192.00 sf	31.00 /mh	0	0.50 /sf	96	-	-	-	-	-	-	96	96
	Oil SOG Form	3100.310	192.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Finish- Rough	3350.110	80.00 sf	31.00 /mh	22	0.01 /sf	0	-	-	-	-	-	-	23	32
	Liquid Curing Compounds	3390.170	80.00 sf	31.00 /mh	5	0.06 /sf	5	-	-	-	-	-	-	10	12
	4500 psi Concrete	3310.100	11.85 cy	-	-	165.00 /cy	2,093	-	-	-	-	-	-	2,093	2,093
	Encasement Rebar	3210.104	1.48 tn	31.00 /mh	1,377	1,400.00 /tn	2,177	-	-	-	-	-	-	3,554	4,105
	Slab Void - 6"	3100.320	41.00 sf	31.00 /mh	13	10.00 /sf	451	-	-	-	-	-	-	464	469
	20" RS, Influent Underslab Encasement		16.00 CY		4,334		8,488	/CY						12,822	14,556
	0330 4- 6" RS Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	112.00 sf	31.00 /mh	868	1.50 /sf	176	-	-	-	-	-	-	1,044	1,392
	Place Pipe Encasement	3310.195	9.00 cy	31.00 /mh	299	166.00 /cy	1,599	-	-	-	-	-	-	1,897	2,017
	Nails and Hardware	3150.200	112.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	5	5
	Form Ties Specialty	3150.632	7.00 ea	31.00 /mh	43	5.00 /ea	35	-	-	-	-	-	-	78	96

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0330	4- 6" RS Underslab Encasement														
	Pipe Tie Downs (Small)	3150.200	4.00 ea	31.00 /mh	496	75.00 /ea	300	-	-	-	-	-	-	796	994
	Dimension Lumber	3150.200	112.00 sf	31.00 /mh	0	0.50 /sf	56	-	-	-	-	-	-	56	56
	Oil SOG Form	3100.310	112.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	40.00 sf	31.00 /mh	11	0.01 /sf	0	-	-	-	-	-	-	11	16
	Liquid Curing Compounds	3390.170	40.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	5	6
	Encasement Rebar	3210.104	0.74 tn	31.00 /mh	689	1,400.00 /tn	1,089	-	-	-	-	-	-	1,778	2,054
	4500 psi Concrete	3310.100	5.93 cy	-	-	165.00 /cy	1,046	-	-	-	-	-	-	1,046	1,046
	Slab Void - 6"	3100.320	30.00 sf	31.00 /mh	93	10.00 /sf	330	-	-	-	-	-	-	423	460
	6" RS Underslab Encasement		9.00 CY		2,502		4,641	/CY						7,143	8,143
150-01	1c 12042002 16"/20" RS to Influent Channel														
	DI Pipe 16in. dia FxF - 4ft. 0in. Epoxy Lined	15221.010	2.00 ea	31.00 /mh	248	3,700.00 /ea	7,400	-	-	-	-	-	-	7,648	7,747
	DI Pipe 16in. dia FxPE - 10ft. 0in. Epoxy Lined	15221.030	1.00 ea	31.00 /mh	124	6,500.00 /ea	6,500	-	-	-	-	-	-	6,624	6,674
	DI Pipe 20in. dia FxPE - 6ft. 1in. Epoxy Lined	15221.030	2.00 ea	31.00 /mh	248	4,000.00 /ea	8,000	-	-	-	-	-	-	8,248	8,347
	DI Flanged Con Red 20x16" Epoxy Lined	15221.445	2.00 ea	31.00 /mh	248	6,100.00 /ea	12,200	-	-	-	-	-	-	12,448	12,547
	NBG Kit 125# SS 16in	15125.012	5.00 ea	31.00 /mh	155	900.00 /ea	4,500	-	-	-	-	-	-	4,655	4,717
	NBG Kit 125# SS 20in	15125.012	2.00 ea	31.00 /mh	124	1,200.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	DI Wall Pipe FLG x PE w/ Collar & Tapped Holes 20in x 3ft 0in long	15221.380	1.00 ea	31.00 /mh	186	3,300.00 /ea	3,300	-	-	-	-	-	-	3,486	3,560
	Instrument - Flow - Magnetic Flow Meter - 16in	17200.000	1.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	Restrained Dismantling Joint 16" SS Bolts	15112.085	1.00 ea	31.00 /mh	186	5,200.00 /ea	5,200	-	-	-	-	-	-	5,386	5,460
	DI MEGAFLANGE w/ SS Bolts for DIP 16"	15112.230	1.00 ea	31.00 /mh	140	2,500.00 /ea	2,500	-	-	-	-	-	-	2,640	2,695
	DI MEGAFLANGE w/ SS Bolts for DIP 20"	15112.230	1.00 ea	31.00 /mh	186	2,500.00 /ea	2,500	-	-	-	-	-	-	2,686	2,760
	PVC Sch 80 PIPE 16" PE	15211.203	10.00 lf	31.00 /mh	124	200.00 /lf	2,000	-	-	-	-	-	-	2,124	2,174
	PVC Sch 80 Flange Van Stone 16" Soc	15211.223	2.00 ea	31.00 /mh	124	2,000.00 /ea	4,000	-	-	-	-	-	-	4,124	4,174
	16"/20" RS to Influent Channel				2,341		60,500							62,841	63,777
150-01	1c 12042002 6" RS to Influent Channel														
	DI Pipe 6in. dia FxF - 5ft. 0in. Epoxy Lined	15221.010	1.00 ea	31.00 /mh	93	1,050.00 /ea	1,050	-	-	-	-	-	-	1,143	1,180
	DI Pipe 6in. dia FxF - 10ft. 0in. Epoxy Lined	15221.010	2.00 ea	31.00 /mh	248	1,600.00 /ea	3,200	-	-	-	-	-	-	3,448	3,547
	DI Pipe 6in. dia FxF - 12ft. 0in. Epoxy Lined	15221.010	1.00 ea	31.00 /mh	155	1,800.00 /ea	1,800	-	-	-	-	-	-	1,955	2,017
	DI Pipe 6in. dia FxF - 14ft. 0in. Epoxy Lined	15221.010	1.00 ea	31.00 /mh	186	2,000.00 /ea	2,000	-	-	-	-	-	-	2,186	2,260
	DI Pipe 6in. dia FxF - 18ft. 0in. Epoxy Lined	15221.010	1.00 ea	31.00 /mh	248	2,500.00 /ea	2,500	-	-	-	-	-	-	2,748	2,847
	DI Pipe 6in. dia FxPE - 5ft. 0in. Epoxy Lined	15221.030	3.00 ea	31.00 /mh	279	800.00 /ea	2,400	-	-	-	-	-	-	2,679	2,791
	DI Pipe 6in. dia FxPE - 10ft. 0in. Epoxy Lined	15221.030	1.00 ea	31.00 /mh	124	1,400.00 /ea	1,400	-	-	-	-	-	-	1,524	1,574
	DI Pipe 6in. dia FxPE - 18ft. 0in. Epoxy Lined	15221.030	1.00 ea	31.00 /mh	124	2,300.00 /ea	2,300	-	-	-	-	-	-	2,424	2,474
	DI Flanged 90 ell 6" Epoxy Lined	15221.430	6.00 ea	31.00 /mh	372	650.00 /ea	3,900	-	-	-	-	-	-	4,272	4,421
	DI Flanged Tee 6" Epoxy Lined	15221.455	1.00 ea	31.00 /mh	62	850.00 /ea	850	-	-	-	-	-	-	912	937
	Link Seal Size LS-475-S	15123.100	40.00 ea	31.00 /mh	186	16.00 /ea	640	-	-	-	-	-	-	826	900
	Sleeve Plastic CS-10-	15121.600	2.00 ea	31.00 /mh	62	170.00 /ea	340	-	-	-	-	-	-	402	427
	PS Clevis Hanger HDG 6in	15060.098	7.00 ea	31.00 /mh	217	17.00 /ea	119	-	-	-	-	-	-	336	423
	PS Pipe Stand for 6in DIP 5ft 0in floor to CL HDG	15060.406	1.00 ea	31.00 /mh	62	0.01 /ea	0	-	-	-	-	-	-	62	87
	PS Special Support for 6in DIP - Galv	15060.475	2.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	NBG Kit 125# SS 6in	15125.012	20.00 ea	31.00 /mh	310	250.00 /ea	5,000	-	-	-	-	-	-	5,310	5,434
	DI MEGAFLANGE w/ SS Bolts for DIP 6"	15112.230	6.00 ea	31.00 /mh	419	300.00 /ea	1,800	-	-	-	-	-	-	2,219	2,386
	PS Expansion Anchor 5/8 x 7in SS	15060.127	16.00 ea	31.00 /mh	50	14.00 /ea	224	-	-	-	-	-	-	274	293
	PS Pipe Stand grout	15060.404	1.00 ea	31.00 /mh	16	8.00 /ea	8	-	-	-	-	-	-	24	30
	DI Blind Flange 6" w/ 2" tap	15221.405	1.00 ea	31.00 /mh	31	170.00 /ea	170	-	-	-	-	-	-	201	213
	Grout Sleeve 12in	15124.300	4.00 ea	31.00 /mh	248	20.00 /ea	80	-	-	-	-	-	-	328	427
	PS Epoxy Anchor 3/8 x 5in SS	15060.112	16.00 ea	31.00 /mh	25	14.00 /ea	224	-	-	-	-	-	-	249	259
	PS Strut SS 1-5/8 x 1-5/8	15060.476	40.00 lf	31.00 /mh	372	15.00 /lf	600	-	-	-	-	-	-	972	1,121
	Valve Air Release 2in	15110.005	1.00 ea	31.00 /mh	93	4,600.00 /ea	4,600	-	-	-	-	-	-	4,693	4,730
	Valve Ball Threaded SS 2in	15110.014	1.00 ea	31.00 /mh	93	465.00 /ea	465	-	-	-	-	-	-	558	595
	Stainless Steel Nipple 2" X 3"	15212.010	2.00 ea	31.00 /mh	20	15.00 /ea	30	-	-	-	-	-	-	50	59
	PVC Sch 80 PIPE 1/2" PE	15211.203	20.00 lf	31.00 /mh	130	1.00 /lf	20	-	-	-	-	-	-	150	202
	PVC Sch 80 MALE ADPT 1/2" SXMT	15211.217	1.00 ea	31.00 /mh	7	2.20 /ea	2	-	-	-	-	-	-	9	11
	PVC Sch 80 90 EL 1/2" S	15211.207	2.00 ea	31.00 /mh	13	1.00 /ea	2	-	-	-	-	-	-	15	20
	PVC Sch 80 45 EL 1/2" SOCxSOC	15211.208	4.00 ea	31.00 /mh	26	1.90 /ea	8	-	-	-	-	-	-	34	44
	PS 2 Piece Clamp SS 1/2 in	15060.518	6.00 ea	31.00 /mh	56	4.00 /ea	24	-	-	-	-	-	-	80	102
	Valve Plug Flange 125# 6in	15110.650	1.00 ea	31.00 /mh	93	1,280.00 /ea	1,280	-	-	-	-	-	-	1,373	1,410
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	6" RS to Influent Channel				4,790		37,086				50			41,926	43,843
150-01	1c 12042002 4" Grit Suction														
	DI Pipe 4in. dia FxV - 10ft. 0in. Glass Lined	15221.040	4.00 ea	31.00 /mh	248	1,400.00 /ea	5,600	-	-	-	-	-	-	5,848	5,947
	DI Pipe 4in. dia VxPE - 18ft. 0in. Glass Lined	15221.090	1.00 ea	31.00 /mh	124	2,100.00 /ea	2,100	-	-	-	-	-	-	2,224	2,274
	DI VIC Lateral 45 Wye 4" Glass Lined	15221.675	3.00 ea	31.00 /mh	186	1,800.00 /ea	5,400	-	-	-	-	-	-	5,586	5,660
	DI Flanged Con Red 4x3" Glass Lined	15221.445	2.00 ea	31.00 /mh	62	450.00 /ea	900	-	-	-	-	-	-	962	987
	Link Seal Size LS-475-S	15123.100	48.00 ea	31.00 /mh	223	16.00 /ea	768	-	-	-	-	-	-	991	1,080
	Sleeve Plastic CS-8-	15121.600	3.00 ea	31.00 /mh	186	150.00 /ea	450	-	-	-	-	-	-	636	710
	Valve Plug Flange 125# 4in (V405) w/ Elec Actuator	15110.650	2.00 ea	31.00 /mh	186	6,700.00 /ea	13,400	-	-	-	-	-	-	13,586	13,660
	PS Pipe Stand for 4in DIP 3ft 0in floor to CL HDG	15060.406	4.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	NBG Kit 125# SS 3in	15125.012	4.00 ea	31.00 /mh	62	205.00 /ea	820	-	-	-	-	-	-	882	907
	NBG Kit 125# SS 4in	15125.012	21.00 ea	31.00 /mh	326	200.00 /ea	4,200	-	-	-	-	-	-	4,526	4,656
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	6.00 ea	31.00 /mh	279	200.00 /ea	1,200	-	-	-	-	-	-	1,479	1,591

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
150-01 1c 12042002 4" Grit Suction															
	DI VIC Cap 4" w/ 1-1/2" tap	15221.605	2.00 ea	31.00 /mh	31	250.00 /ea	500	-	-	-	-	-	-	531	543
	PS Pipe Stand grout	15060.404	3.00 ea	31.00 /mh	93	8.00 /ea	24	-	-	-	-	-	-	117	154
	Expansion Joint Flanged Rubber 4"	15112.050	2.00 ea	31.00 /mh	248	2,700.00 /ea	5,400	-	-	-	-	-	-	5,648	5,747
	Valve Ball Threaded SS 1-½in	15110.014	2.00 ea	31.00 /mh	71	366.00 /ea	732	-	-	-	-	-	-	803	832
	Stainless Steel Nipple 1.5" x 3	15212.010	2.00 ea	31.00 /mh	16	8.00 /ea	16	-	-	-	-	-	-	32	38
	Grout Sleeve 8in	15124.300	3.00 ea	31.00 /mh	186	15.00 /ea	45	-	-	-	-	-	-	231	305
	PS Expansion Anchor 5/8 x 7in SS	15060.127	16.00 ea	31.00 /mh	25	14.00 /ea	224	-	-	-	-	-	-	249	259
	DI VIC Coupling 4"	15221.680	10.00 ea	31.00 /mh	155	120.00 /ea	1,200	-	-	-	-	-	-	1,355	1,417
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
4" Grit Suction					3,450		43,029				50			46,529	47,910
150-01 1c 12042002 4" Grit Discharge															
	DI Pipe 4in. dia FxF - 2ft. 0in. Glass Lined	15221.010	2.00 ea	31.00 /mh	124	575.00 /ea	1,150	-	-	-	-	-	-	1,274	1,324
	DI Pipe 4in. dia FxF - 4ft. 0in. Glass Lined	15221.010	2.00 ea	31.00 /mh	124	800.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	DI Pipe 4in. dia FxF - 5ft. 0in. Glass Lined	15221.010	1.00 ea	31.00 /mh	93	910.00 /ea	910	-	-	-	-	-	-	1,003	1,040
	DI Pipe 4in. dia FxF - 6ft. 0in. Glass Lined	15221.010	2.00 ea	31.00 /mh	186	1,020.00 /ea	2,040	-	-	-	-	-	-	2,226	2,300
	DI Pipe 4in. dia FxF - 18ft. 0in. Glass Lined	15221.010	1.00 ea	31.00 /mh	186	2,400.00 /ea	2,400	-	-	-	-	-	-	2,586	2,660
	DI Pipe 4in. dia FxPE - 10ft. 0in. Glass Lined	15221.030	3.00 ea	31.00 /mh	372	1,300.00 /ea	3,900	-	-	-	-	-	-	4,272	4,421
	DI Pipe 4in. dia FxPE - 18ft. 0in. Glass Lined	15221.030	2.00 ea	31.00 /mh	372	2,200.00 /ea	4,400	-	-	-	-	-	-	4,772	4,921
	DI Flanged 90 ell 4" Glass Lined	15221.430	2.00 ea	31.00 /mh	124	600.00 /ea	1,200	-	-	-	-	-	-	1,324	1,374
	DI Flanged 45 ell 4" Glass Lined	15221.425	2.00 ea	31.00 /mh	124	600.00 /ea	1,200	-	-	-	-	-	-	1,324	1,374
	DI Flanged Tee 4" Glass Lined	15221.455	2.00 ea	31.00 /mh	124	800.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	DI Flanged Wye 4"	15221.460	2.00 ea	31.00 /mh	186	500.00 /ea	1,000	-	-	-	-	-	-	1,186	1,260
	DI Flanged Con Red 4x3" Glass Lined	15221.445	2.00 ea	31.00 /mh	124	450.00 /ea	900	-	-	-	-	-	-	1,024	1,074
	Link Seal Size LS-475-S	15123.100	64.00 ea	31.00 /mh	298	16.00 /ea	1,024	-	-	-	-	-	-	1,322	1,441
	Sleeve Plastic CS-8-	15121.600	4.00 ea	31.00 /mh	248	150.00 /ea	600	-	-	-	-	-	-	848	947
	Valve Check Flange 125# 4in	15110.040	2.00 ea	31.00 /mh	124	1,580.00 /ea	3,160	-	-	-	-	-	-	3,284	3,334
	Valve Plug Flange 125# 4in	15110.650	3.00 ea	31.00 /mh	186	1,200.00 /ea	3,600	-	-	-	-	-	-	3,786	3,860
	PS Clevis Hanger SS 4in	15060.096	8.00 ea	31.00 /mh	248	47.00 /ea	376	-	-	-	-	-	-	624	723
	NBG Kit 125# SS 3in	15125.012	6.00 ea	31.00 /mh	93	205.00 /ea	1,230	-	-	-	-	-	-	1,323	1,360
	NBG Kit 125# SS 4in	15125.012	36.00 ea	31.00 /mh	558	200.00 /ea	7,200	-	-	-	-	-	-	7,758	7,981
	DI MEGAFLANGE w/ SS Bolts for DIP 3"	15112.230	6.00 ea	31.00 /mh	279	125.00 /ea	750	-	-	-	-	-	-	1,029	1,141
	DI Blind Flange 4" w/ 1-1/2" tap	15221.405	3.00 ea	31.00 /mh	93	120.00 /ea	360	-	-	-	-	-	-	453	490
	Expansion Joint Flanged Rubber 4"	15112.050	2.00 ea	31.00 /mh	266	2,700.00 /ea	5,400	-	-	-	-	-	-	5,666	5,772
	PS Threaded Rod 3/4in SS	15060.502	40.00 lf	31.00 /mh	124	8.00 /lf	320	-	-	-	-	-	-	444	494
	PS Strut Embed SS 1-5/8 x 1-5/8	15060.477	40.00 lf	31.00 /mh	372	15.00 /lf	600	-	-	-	-	-	-	972	1,121
	Instrument - Pressure - Gauge	17400.000	2.00 ea	31.00 /mh	186	1,200.00 /ea	2,400	-	-	-	-	-	-	2,586	2,660
	Instrument - Pressure - Transmitter	17400.000	2.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Stainless Steel Nipple 1.5" x 3"	15212.010	6.00 ea	31.00 /mh	47	8.00 /ea	48	-	-	-	-	-	-	95	113
	Valve Ball Threaded SS 1-½in	15110.014	2.00 ea	31.00 /mh	71	366.00 /ea	732	-	-	-	-	-	-	803	832
	Grout Sleeve 8in	15124.300	4.00 ea	31.00 /mh	248	15.00 /ea	60	-	-	-	-	-	-	308	407
	LS for Vic	15060.476	1.00 ls	-	-	3,000.00 /ls	3,000	-	-	-	-	-	-	3,000	3,000
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
4" Grit Discharge					5,951		53,210				50			59,211	61,593
150-01 1c 12042002 6" PRD, Grit Classifier															
	DI Pipe 6in. dia FxF - 3ft. 0in.	15221.010	3.00 ea	31.00 /mh	186	650.00 /ea	1,950	-	-	-	-	-	-	2,136	2,210
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	1.00 ea	31.00 /mh	93	560.00 /ea	560	-	-	-	-	-	-	653	690
	DI Pipe 6in. dia FxF - 18ft. 0in.	15221.010	1.00 ea	31.00 /mh	186	1,600.00 /ea	1,600	-	-	-	-	-	-	1,786	1,860
	DI Pipe 6in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	248	900.00 /ea	1,800	-	-	-	-	-	-	2,048	2,147
	DI Pipe 6in. dia FxPE - 18ft. 0in.	15221.030	1.00 ea	31.00 /mh	186	1,400.00 /ea	1,400	-	-	-	-	-	-	1,586	1,660
	DI Flanged 90 ell 6"	15221.430	4.00 ea	31.00 /mh	248	300.00 /ea	1,200	-	-	-	-	-	-	1,448	1,547
	DI Flanged 90 ell 4"	15221.430	1.00 ea	31.00 /mh	31	200.00 /ea	200	-	-	-	-	-	-	231	243
	DI Flanged 45 ell 6"	15221.425	1.00 ea	31.00 /mh	62	300.00 /ea	300	-	-	-	-	-	-	362	387
	DI Flanged Tee 6"	15221.455	3.00 ea	31.00 /mh	186	450.00 /ea	1,350	-	-	-	-	-	-	1,536	1,610
	DI Flanged Wye 6"	15221.460	1.00 ea	31.00 /mh	62	750.00 /ea	750	-	-	-	-	-	-	812	837
	DI Flanged Con Red 6x4"	15221.445	1.00 ea	31.00 /mh	62	300.00 /ea	300	-	-	-	-	-	-	362	387
	PS Clevis Hanger SS 6in	15060.096	2.00 ea	31.00 /mh	62	65.00 /ea	130	-	-	-	-	-	-	192	217
	PS Pipe Stand for 6in DIP 2ft 0in floor to CL SS	15060.408	3.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	NBG Kit 125# SS 6in	15125.012	20.00 ea	31.00 /mh	310	250.00 /ea	5,000	-	-	-	-	-	-	5,310	5,434
	DI MEGAFLANGE w/ SS Bolts for DIP 6"	15112.230	3.00 ea	31.00 /mh	209	300.00 /ea	900	-	-	-	-	-	-	1,109	1,193
	NBG Kit 125# SS 4in	15125.012	3.00 ea	31.00 /mh	47	200.00 /ea	600	-	-	-	-	-	-	647	665
	PS Pipe Stand grout	15060.404	2.00 ea	31.00 /mh	62	8.00 /ea	16	-	-	-	-	-	-	78	103
	PS Expansion Anchor 5/8 x 7in SS	15060.127	19.00 ea	31.00 /mh	59	14.00 /ea	266	-	-	-	-	-	-	325	348
	MI Companion Flange Galv 6	15213.284	1.00 ea	31.00 /mh	6	50.00 /ea	50	-	-	-	-	-	-	56	59
	Bird Screens @ Vent	10210.100	1.00 ea	31.00 /mh	93	25.00 /ea	25	-	-	-	-	-	-	118	155
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
6" PRD, Grit Classifier					2,832		18,447				50			21,329	22,463
150-01 1c 12042002 4" NPW															
	DI Pipe 4in. dia FxF - 2ft. 0in.	15221.010	4.00 ea	31.00 /mh	248	455.00 /ea	1,820	-	-	-	-	-	-	2,068	2,167
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	3.00 ea	31.00 /mh	279	510.00 /ea	1,530	-	-	-	-	-	-	1,809	1,921
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	186	560.00 /ea	1,120	-	-	-	-	-	-	1,306	1,380
	DI Pipe 4in. dia FxF - 6ft. 0in.	15221.010	4.00 ea	31.00 /mh	372	850.00 /ea	3,400	-	-	-	-	-	-	3,772	3,921

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 4" NPW														
	DI Pipe 4in. dia Fx F - 8ft. 0in.	15221.010	3.00 ea	31.00 /mh	372	780.00 /ea	2,340	-	-	-	-	-	-	2,712	2,861
	DI Pipe 4in. dia Fx F - 10ft. 0in.	15221.010	4.00 ea	31.00 /mh	496	900.00 /ea	3,600	-	-	-	-	-	-	4,096	4,294
	DI Pipe 4in. dia Fx F - 18ft. 0in.	15221.010	3.00 ea	31.00 /mh	558	1,300.00 /ea	3,900	-	-	-	-	-	-	4,458	4,681
	DI Pipe 4in. dia Fx PE - 5ft. 0in.	15221.030	3.00 ea	31.00 /mh	186	450.00 /ea	1,350	-	-	-	-	-	-	1,536	1,610
	DI Pipe 4in. dia Fx PE - 6ft. 0in.	15221.030	3.00 ea	31.00 /mh	279	600.00 /ea	1,800	-	-	-	-	-	-	2,079	2,191
	DI Pipe 4in. dia Fx PE - 7ft. 0in.	15221.030	1.00 ea	31.00 /mh	93	700.00 /ea	700	-	-	-	-	-	-	793	830
	DI Pipe 4in. dia Fx PE - 18ft. 0in.	15221.030	6.00 ea	31.00 /mh	1,116	1,200.00 /ea	7,200	-	-	-	-	-	-	8,316	8,762
	DI Flanged 90 ell 4"	15221.430	16.00 ea	31.00 /mh	992	200.00 /ea	3,200	-	-	-	-	-	-	4,192	4,589
	DI Flanged Tee 4"	15221.455	13.00 ea	31.00 /mh	806	300.00 /ea	3,900	-	-	-	-	-	-	4,706	5,028
	Valve Butterfly Lugged 125# 4in	15110.026	6.00 ea	31.00 /mh	93	1,150.00 /ea	6,900	-	-	-	-	-	-	6,993	7,030
	PS Clevis Hanger SS 4in	15060.096	8.00 ea	31.00 /mh	248	47.00 /ea	376	-	-	-	-	-	-	624	723
	PS Knee Brace for 4in DIP 18in horizontal length SS	15060.280	18.00 ea	31.00 /mh	1,674	0.01 /ea	0	-	-	-	-	-	-	1,674	2,344
	NBG Kit 125# SS 4in	15125.012	116.00 ea	31.00 /mh	1,798	200.00 /ea	23,200	-	-	-	-	-	-	24,998	25,717
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	12.00 ea	31.00 /mh	558	200.00 /ea	2,400	-	-	-	-	-	-	2,958	3,181
	DI Blind Flange 4" w/ 2" tap	15221.405	15.00 ea	31.00 /mh	465	120.00 /ea	1,800	-	-	-	-	-	-	2,265	2,451
	PS Epoxy Anchor 3/4 x 8-1/2in SS	15060.112	70.00 ea	31.00 /mh	217	24.00 /ea	1,680	-	-	-	-	-	-	1,897	1,984
	Valve PRV Flange SS 150# 4" NPW	15110.735	1.00 ea	31.00 /mh	186	10,000.00 /ea	10,000	-	-	-	-	-	-	10,186	10,260
	Core Drilled Hole - 8 -*	15122.100	4.00 ea	31.00 /mh	248	200.00 /ea	800	150.00 /ea	600	-	-	-	-	1,648	1,747
	Link Seal Size LS-475-S	15123.100	32.00 ea	31.00 /mh	149	16.00 /ea	512	-	-	-	-	-	-	661	720
	Grout Sleeve 8in	15124.300	4.00 ea	31.00 /mh	248	15.00 /ea	60	-	-	-	-	-	-	308	407
	4" NPW				11,867		83,588		600					96,055	100,802
	150-01 1c 12042002 1/4" Air to Grit Classifier														
	Stainless Steel Pipe 1/4"	15212.005	40.00 lf	31.00 /mh	248	6.00 /lf	240	-	-	-	-	-	-	488	587
	Stainless Steel Nipple 1/4" x 2"	15212.010	4.00 ea	31.00 /mh	31	5.00 /ea	20	-	-	-	-	-	-	51	63
	Stainless Steel 90 Elbow 1/4"	15212.040	8.00 ea	31.00 /mh	50	25.00 /ea	200	-	-	-	-	-	-	250	269
	Stainless Steel 45 Elbow 1/4"	15212.035	6.00 ea	31.00 /mh	37	21.00 /ea	126	-	-	-	-	-	-	163	178
	Stainless Steel Coupling 1/4"	15212.025	4.00 ea	31.00 /mh	25	20.00 /ea	80	-	-	-	-	-	-	105	115
	Valve Ball Threaded SS 1/4in	15110.014	6.00 ea	31.00 /mh	190	84.00 /ea	504	-	-	-	-	-	-	694	770
	Stainless Steel Tee 1/4"	15212.055	3.00 ea	31.00 /mh	19	25.00 /ea	75	-	-	-	-	-	-	94	101
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	31.00 /mh	186	15.00 /lf	300	-	-	-	-	-	-	486	560
	PS 2 Piece Clamp SS 1/4 in	15060.518	15.00 ea	31.00 /mh	140	4.00 /ea	60	-	-	-	-	-	-	200	255
	PS Expansion Anchor 3/8 x 5in SS	15060.127	10.00 ea	31.00 /mh	16	5.00 /ea	50	-	-	-	-	-	-	66	72
	1/4" Air to Grit Classifier				940		1,655							2,595	2,971
	150-55 80 8" Grit Classifier SCR														
	PVC Sch 80 PIPE 8" PE	15211.203	20.00 lf	31.00 /mh	310	30.00 /lf	600	-	-	-	-	-	-	910	1,034
	PVC Sch 80 45 EL 8" SOCxSOC	15211.208	2.00 ea	31.00 /mh	62	80.00 /ea	160	-	-	-	-	-	-	222	247
	PVC Sch 80 Straight CPLG 8" S	15211.204	1.00 ea	31.00 /mh	31	35.00 /ea	35	-	-	-	-	-	-	66	78
	PVC Sch 80 Flange Van Stone 8" Soc	15211.223	6.00 ea	31.00 /mh	186	140.00 /ea	840	-	-	-	-	-	-	1,026	1,100
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh		45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh		35.00 /qt	39	-	-	-	-	-	-	39	39
	NBG Kit 125# SS 8in	15125.012	4.00 ea	31.00 /mh	124	250.00 /ea	1,000	-	-	-	-	-	-	1,124	1,174
	Elephant Trunk to Dumpster	14559.160	1.00 ea	31.00 /mh	248	1,500.00 /ea	1,500	-	-	-	-	-	-	1,748	1,847
	PS Special Support for 10in Sch 80 PVC - Stainless	15060.475	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	Sleeve SS 12" x 1	15121.200	1.00 ea	31.00 /mh	124	1,600.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	8" Grit Classifier SCR		20.00 lf		1,333		5,823	/lf						7,156	7,689
	150-55 80 10" Influent SCR to Dumpster														
	PVC Sch 80 PIPE 10" PE	15211.203	40.00 lf	31.00 /mh	1,240	50.00 /lf	2,000	-	-	-	-	-	-	3,240	3,736
	PVC Sch 80 45 EL 10" SOCxSOC	15211.208	4.00 ea	31.00 /mh	248	520.00 /ea	2,080	-	-	-	-	-	-	2,328	2,427
	PVC Sch 80 Straight CPLG 10" S	15211.204	2.00 ea	31.00 /mh	124	250.00 /ea	500	-	-	-	-	-	-	624	674
	PVC Sch 80 Flange Van Stone 10" Soc	15211.223	10.00 ea	31.00 /mh	620	180.00 /ea	1,800	-	-	-	-	-	-	2,420	2,668
	PVC Sch 80 Cement	15211.201	3.00 qt	31.00 /mh		45.00 /qt	149	-	-	-	-	-	-	149	149
	PVC Sch 80 Primer	15211.201	3.00 qt	31.00 /mh		35.00 /qt	116	-	-	-	-	-	-	116	116
	NBG Kit 125# SS 10in	15125.012	6.00 ea	31.00 /mh	186	500.00 /ea	3,000	-	-	-	-	-	-	3,186	3,260
	Elephant Trunk	14559.160	2.00 ea	31.00 /mh	744	1,500.00 /ea	3,000	-	-	-	-	-	-	3,744	4,042
	PS Special Support for 10in Sch 80 PVC - SSt	15060.475	4.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	10" Influent SCR to Dumpster		40.00 lf		3,658		12,644	/lf						16,302	17,765
	150-55 80 3" PRD from Screens to Channel														
	PVC Sch 80 PIPE 3" PE	15211.203	60.00 lf	31.00 /mh	558	8.00 /lf	480	-	-	-	-	-	-	1,038	1,261
	PVC Sch 80 90 EL 3" S	15211.207	10.00 ea	31.00 /mh	93	9.50 /ea	95	-	-	-	-	-	-	188	225
	PVC Sch 80 Straight CPLG 3" S	15211.204	4.00 ea	31.00 /mh	37	10.00 /ea	40	-	-	-	-	-	-	77	92
	PVC Sch 80 Flange Van Stone 3" Soc	15211.223	3.00 ea	31.00 /mh	28	40.00 /ea	120	-	-	-	-	-	-	148	159
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh		45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh		35.00 /qt	39	-	-	-	-	-	-	39	39
	NBG Kit 125# SS 3in	15125.012	3.00 ea	31.00 /mh	47	205.00 /ea	615	-	-	-	-	-	-	662	680
	Pipe Tie Downs (Small)	3150.200	10.00 ea	31.00 /mh	930	75.00 /ea	750	-	-	-	-	-	-	1,680	2,052
	3" PRD from Screens to Channel		60.00 lf		1,693		2,188	/lf						3,881	4,558
	150-55 80 1" Sample Line to Auto Sampler														
	PVC Sch 80 PIPE 1" PE	15211.203	20.00 lf	31.00 /mh	130	2.00 /lf	40	-	-	-	-	-	-	170	222
	PVC Sch 80 90 EL 1" S	15211.207	8.00 ea	31.00 /mh	52	2.10 /ea	17	-	-	-	-	-	-	69	90
	PVC Sch 80 45 EL 1" SOCxSOC	15211.208	6.00 ea	31.00 /mh	39	4.40 /ea	26	-	-	-	-	-	-	65	81
	PVC Sch 80 Straight CPLG 1" S	15211.204	1.00 ea	31.00 /mh	7	2.00 /ea	2	-	-	-	-	-	-	9	11

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-55 80 1" Sample Line to Auto Sampler														
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	3.00 ea	31.00 /mh	20	4.10 /ea	12	-	-	-	-	-	-	32	40
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh		45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh		35.00 /qt	39	-	-	-	-	-	-	39	39
	PVC Valve Ball True Union Viton 1" S & T	15211.310	3.00 ea	31.00 /mh	93	45.00 /ea	135	-	-	-	-	-	-	228	265
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	31.00 /mh	93	15.00 /lf	150	-	-	-	-	-	-	243	280
	PS 2 Piece Clamp SS 1in	15060.518	10.00 ea	31.00 /mh	93	5.00 /ea	50	-	-	-	-	-	-	143	180
	PS Expansion Anchor 3/8 x 5in SS	15060.127	10.00 ea	31.00 /mh	31	5.00 /ea	50	-	-	-	-	-	-	81	93
	1" Sample Line to Auto Sampler		20.00 lf		557		571	/lf						1,128	1,351
	150-55 80 NPW PVC														
	PVC Sch 80 PIPE 1.5" PE	15211.203	200.00 lf	31.00 /mh	1,302	3.00 /lf	600	-	-	-	-	-	-	1,902	2,423
	PVC Sch 80 PIPE 2" PE	15211.203	180.00 lf	31.00 /mh	1,172	4.00 /lf	720	-	-	-	-	-	-	1,892	2,361
	PVC Sch 80 90 EL 1.5" S	15211.207	40.00 ea	31.00 /mh	260	3.00 /ea	120	-	-	-	-	-	-	380	485
	PVC Sch 80 45 EL 1.5" SOCxSOC	15211.208	30.00 ea	31.00 /mh	195	6.60 /ea	198	-	-	-	-	-	-	393	471
	PVC Sch 80 90 EL 2" S	15211.207	30.00 ea	31.00 /mh	195	3.60 /ea	108	-	-	-	-	-	-	303	381
	PVC Sch 80 45 EL 2" SOCxSOC	15211.208	28.00 ea	31.00 /mh	182	7.00 /ea	196	-	-	-	-	-	-	378	451
	PVC Sch 80 Straight CPLG 1.5" S	15211.204	20.00 ea	31.00 /mh	130	3.00 /ea	60	-	-	-	-	-	-	190	242
	PVC Sch 80 TEE 1.5" S	15211.211	16.00 ea	31.00 /mh	104	10.20 /ea	163	-	-	-	-	-	-	267	309
	PVC Sch 80 TEE 2" S	15211.211	18.00 ea	31.00 /mh	117	12.80 /ea	230	-	-	-	-	-	-	348	394
	PVC Sch 80 MALE ADPT 1.5" SXMT	15211.217	22.00 ea	31.00 /mh	143	6.80 /ea	150	-	-	-	-	-	-	293	350
	PVC Sch 80 Straight CPLG 2" S	15211.204	14.00 ea	31.00 /mh	91	4.00 /ea	56	-	-	-	-	-	-	147	184
	PVC Sch 80 Cement	15211.201	15.00 qt	31.00 /mh		45.00 /qt	743	-	-	-	-	-	-	743	743
	PVC Sch 80 Primer	15211.201	15.00 qt	31.00 /mh		35.00 /qt	578	-	-	-	-	-	-	578	578
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	32.00 ea	31.00 /mh	208	9.90 /ea	317	-	-	-	-	-	-	525	608
	PVC Sch 80 Flange Van Stone 2" Soc	15211.223	8.00 ea	31.00 /mh	52	20.00 /ea	160	-	-	-	-	-	-	212	233
	PVC Valve Ball True Union EPDM 1.5" S & T	15211.320	2.00 ea	31.00 /mh	13	70.00 /ea	140	-	-	-	-	-	-	153	158
	PS Strut SS 1-5/8 x 1-5/8	15060.476	185.00 lf	31.00 /mh	1,721	15.00 /lf	2,775	-	-	-	-	-	-	4,496	5,184
	PS 2 Piece Clamp SS 1-½in	15060.518	80.00 ea	31.00 /mh	744	7.00 /ea	560	-	-	-	-	-	-	1,304	1,602
	PS Expansion Anchor 3/8 x 5in SS	15060.127	156.00 ea	31.00 /mh	484	5.00 /ea	780	-	-	-	-	-	-	1,264	1,457
	NBG Kit 125# SS 1-½in	15125.012	2.00 ea	31.00 /mh	31	80.00 /ea	160	-	-	-	-	-	-	191	203
	NBG Kit 125# SS 2in	15125.012	10.00 ea	31.00 /mh	155	100.00 /ea	1,000	-	-	-	-	-	-	1,155	1,217
	PVC Valve Ball True Union Viton 1.5" S & T	15211.310	28.00 ea	31.00 /mh	434	70.00 /ea	1,960	-	-	-	-	-	-	2,394	2,568
	PVC Valve Ball True Union Viton 2" S & T	15211.310	20.00 ea	31.00 /mh	310	90.00 /ea	1,800	-	-	-	-	-	-	2,110	2,234
	PS 2 Piece Clamp SS 2in	15060.518	60.00 ea	31.00 /mh	558	7.00 /ea	420	-	-	-	-	-	-	978	1,201
	PS Clevis Hanger SS 1-½in	15060.096	11.00 ea	31.00 /mh	102	18.00 /ea	198	-	-	-	-	-	-	300	341
	PS Clevis Hanger SS 2in	15060.096	16.00 ea	31.00 /mh	149	19.00 /ea	304	-	-	-	-	-	-	453	512
	PS Threaded Rod 3/8in SS	15060.502	200.00 lf	31.00 /mh	620	2.00 /lf	400	-	-	-	-	-	-	1,020	1,268
	PS Hex Nut SS 3/8	15060.354	81.00 ea	31.00 /mh	126	0.50 /ea	41	-	-	-	-	-	-	166	216
	PS Washer Flat 3/8 SS	15060.576	81.00 ea	31.00 /mh	63	3.00 /ea	243	-	-	-	-	-	-	306	331
	PS Beam/C Clamp W/lk Nut 3/8	15060.082	16.00 ea	31.00 /mh	50	15.00 /ea	240	-	-	-	-	-	-	290	309
	PS Concrete Insert Blk Steel 3/8" Rod	15060.092	11.00 ea	31.00 /mh	300	25.00 /ea	275	-	-	-	-	-	-	575	695
	PVC Sch 80 TEE 1.5" S	15211.211	15.00 ea	31.00 /mh	98	10.20 /ea	153	-	-	-	-	-	-	251	290
	Valve Special 1-1/2in - Solenoid Valve	15110.003	10.00 ea	31.00 /mh	310	900.00 /ea	9,000	-	-	-	-	-	-	9,310	9,434
	Hose Bib Brass No Press 1-½"	15110.455	8.00 ea	31.00 /mh	74	250.00 /ea	2,000	-	-	-	-	-	-	2,074	2,104
	Valve PRV Threaded Bronze 150# 1.5"	15110.715	3.00 ea	31.00 /mh	279	3,050.00 /ea	9,150	-	-	-	-	-	-	9,429	9,541
	Valve PRV Threaded Bronze 150# 2"	15110.715	2.00 ea	31.00 /mh	186	4,500.00 /ea	9,000	-	-	-	-	-	-	9,186	9,260
	Valve Special 2in - Solenoid Valve	15110.003	9.00 ea	31.00 /mh	558	1,400.00 /ea	12,600	-	-	-	-	-	-	13,158	13,381
	NPW PVC		380.00 lf		11,517		57,597	/lf						69,113	73,720
	150-600 3/4" FC														
	HD PE Pipe 3/4" DR 17	2631.301	30.00 lf	31.00 /mh	233	2.00 /lf	63	-	-	-	-	-	-	296	389
	HD PE 90 bend 3/4 DR 17	2631.314	6.00 ea	31.00 /mh	186	15.00 /ea	90	-	-	-	-	-	-	276	350
	HD PE 45 bend 3/4 DR 17	2631.314	4.00 ea	31.00 /mh	124	5.00 /ea	20	-	-	-	-	-	-	144	194
	HD PE Electrofusion Coupling 3/4" DR 17	2631.356	3.00 ea	31.00 /mh	93	9.00 /ea	27	-	-	-	-	-	-	120	157
	PVC Sch 80 PIPE 3" PE	15211.203	30.00 lf	31.00 /mh	195	8.00 /lf	240	-	-	-	-	-	-	435	513
	CPVC Valve Ball True Union Viton 3/4" S & T	15211.510	6.00 ea	31.00 /mh	39	70.00 /ea	420	-	-	-	-	-	-	459	475
	CPVC Valve Ball Check True Union Viton 3/4" S & T	15211.530	2.00 ea	31.00 /mh	13	70.00 /ea	140	-	-	-	-	-	-	153	158
	Valve PRV Flange SS 150# 3/4"	15110.735	1.00 ea	31.00 /mh	124	950.00 /ea	950	-	-	-	-	-	-	1,074	1,124
	PS 2 Piece Clamp SS 3in	15060.518	10.00 ea	31.00 /mh	93	7.00 /ea	70	-	-	-	-	-	-	163	200
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	31.00 /mh	93	15.00 /lf	150	-	-	-	-	-	-	243	280
	3/4" FC		30.00 lf		1,193		2,170	/lf						3,363	3,840
	GEN General				60,998		416,503		600		696		167	478,963	503,376
	HDPE HDPE														
	0330 4- 3" FERRIC CHLORIDE PIPE ENCASEMENT														
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	139.18 sf	31.00 /mh	1,079	1.50 /sf	219	-	-	-	-	-	-	1,298	1,729
	Place Pipe Encasement	3310.195	6.00 cy	31.00 /mh	199	166.00 /cy	1,066	-	-	-	-	-	-	1,265	1,344
	Nails and Hardware	3150.200	139.18 sf	31.00 /mh	0	0.04 /sf	6	-	-	-	-	-	-	6	6
	Form Ties Specialty	3150.632	22.00 ea	31.00 /mh	136	5.00 /ea	110	-	-	-	-	-	-	246	301
	Pipe Tie Downs (Small)	3150.200	11.00 ea	31.00 /mh	1,364	75.00 /ea	825	-	-	-	-	-	-	2,189	2,735
	Dimension Lumber	3150.200	139.18 sf	31.00 /mh	0	0.50 /sf	70	-	-	-	-	-	-	70	70
	Oil SOG Form	3100.310	139.18 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3
	Finish- Rough	3350.110	66.80 sf	31.00 /mh	19	0.01 /sf	0	-	-	-	-	-	-	19	27

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0330	4- 3" FERRIC CHLORIDE PIPE ENCASEMENT														
	Liquid Curing Compounds	3390.170	66.80 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	8	10
	Pipe Encasement Rebar	3200.980	0.18 tn	31.00 /mh	167	1,400.00 /tn	252	-	-	-	-	-	-	419	486
	3" FERRIC CHLORIDE PIPE ENCASEMENT		6.00 CY		2,968		2,554	/CY						5,523	6,710
	HDPE HDPE				2,968		2,554							5,523	6,710
	100 Headworks				77,008		443,954	/LS	600		696		167	522,425	553,242
150	Influent Pump Station														
GEN	General														
150-01	1c 12042002 10" RS, INF Pump Dishcharge														
	DI Pipe 10in. dia FxF - 18ft. 0in. Epoxy Lined	15221.010	4.00 ea	31.00 /mh	992	4,200.00 /ea	16,800	-	-	-	-	-	-	17,792	18,189
	DI Pipe 10in. dia FxPE - 3ft. 0in. Epoxy Lined	15221.030	4.00 ea	31.00 /mh	496	1,000.00 /ea	4,000	-	-	-	-	-	-	4,496	4,694
	DI Pipe 10in. dia FxPE - 10ft. 0in. Epoxy Lined	15221.030	4.00 ea	31.00 /mh	744	2,300.00 /ea	9,200	-	-	-	-	-	-	9,944	10,242
	DI Pipe 10in. dia FxPE - 10ft. 1in. w/ 2" tap Epoxy Lined	15221.030	4.00 ea	31.00 /mh	744	2,400.00 /ea	9,600	-	-	-	-	-	-	10,344	10,642
	DI Pipe 10in. dia PExPE - 10ft. 0in. Epoxy Lined	15221.070	8.00 ea	31.00 /mh	1,488	2,700.00 /ea	21,600	-	-	-	-	-	-	23,088	23,683
	DI Flanged 90 eII 10" Epoxy Lined	15221.430	4.00 ea	31.00 /mh	372	1,800.00 /ea	7,200	-	-	-	-	-	-	7,572	7,721
	DI Flanged Con Red 10x6" Epoxy Lined	15221.445	4.00 ea	31.00 /mh	372	1,200.00 /ea	4,800	-	-	-	-	-	-	5,172	5,321
	Link Seal Size LS-340-S	15123.100	384.00 ea	31.00 /mh	1,786	15.00 /ea	5,760	-	-	-	-	-	-	7,546	8,260
	Sleeve Steel WS-14-37-S-	15121.800	8.00 ea	31.00 /mh	992	1,450.00 /ea	11,600	-	-	-	-	-	-	12,592	12,989
	Valve Check Flange 125# 10in Rubber Flapper (V634)	15110.040	4.00 ea	31.00 /mh	496	5,800.00 /ea	23,200	-	-	-	-	-	-	23,696	23,894
	Valve Plug Flange 125# 10in (V405)	15110.650	4.00 ea	31.00 /mh	496	2,790.00 /ea	11,160	-	-	-	-	-	-	11,656	11,854
	PS Pipe Stand for 10in DIP 3ft 0in floor to CL HDG	15060.406	4.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	PS Special Support for 10in DIP - Stainless	15060.475	8.00 ea	31.00 /mh	992	0.01 /ea	0	-	-	-	-	-	-	992	1,389
	NBG Kit 125# SS 6in	15125.012	6.00 ea	31.00 /mh	93	250.00 /ea	1,500	-	-	-	-	-	-	1,593	1,630
	NBG Kit 125# SS 10in	15125.012	24.00 ea	31.00 /mh	372	500.00 /ea	12,000	-	-	-	-	-	-	12,372	12,521
	DI MEGAFLANGE w/ SS Bolts for DIP 10"	15112.230	8.00 ea	31.00 /mh	744	700.00 /ea	5,600	-	-	-	-	-	-	6,344	6,642
	PS Expansion Anchor 3/4 x 8-1/2in SS	15060.127	48.00 ea	31.00 /mh	149	25.00 /ea	1,200	-	-	-	-	-	-	1,349	1,408
	PS Pipe Stand grout	15060.404	12.00 ea	31.00 /mh	372	8.00 /ea	96	-	-	-	-	-	-	468	617
	DI Wall Pipe FLG x MJ w/ Collar & Tapped Holes 10in x 1ft 6in long	15221.376	4.00 ea	31.00 /mh	496	2,200.00 /ea	8,800	-	-	-	-	-	-	9,296	9,494
	Restrained Dismantling Joint 10" SS Bolts	15112.085	4.00 ea	31.00 /mh	496	3,000.00 /ea	12,000	-	-	-	-	-	-	12,496	12,694
	10" Double Ball Flex Joint (EBBA Flex-Tend)	15112.010	4.00 ea	31.00 /mh	744	7,500.00 /ea	30,000	-	-	-	-	-	-	30,744	31,042
	DI MEGALUG for DIP 10"	2511.610	12.00 ea	31.00 /mh	186	66.00 /ea	792	-	-	-	-	-	-	978	1,052
	Valve Ball Threaded SS 2in	15110.014	4.00 ea	31.00 /mh	175	465.00 /ea	1,860	-	-	-	-	-	-	2,035	2,105
	Grout Sleeve 18in	15124.300	8.00 ea	31.00 /mh	496	35.00 /ea	280	-	-	-	-	-	-	776	974
	Stainless Steel Nipple 2" X 3"	15212.010	8.00 ea	31.00 /mh	82	15.00 /ea	120	-	-	-	-	-	-	202	235
	Instrument - Pressure - Transmitter	17400.000	4.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Instrument - Pressure - Gauge	17400.000	4.00 ea	31.00 /mh	124	1,200.00 /ea	4,800	-	-	-	-	-	-	4,924	4,974
	Testing Pressure & Leak - Piping	1166.100	4.00 ea	31.00 /mh	992	50.00 /ea	200	-	-	50.00 /ea	200	-	-	1,392	1,793
	10" RS, INF Pump Dishcharge				15,862		204,168				200			220,230	226,579
150-01	1c 12042002 Instrumentation Roof Penetrations														
	NBG Kit 125# SS 8in	15125.012	7.00 ea	31.00 /mh	109	250.00 /ea	1,750	-	-	-	-	-	-	1,859	1,902
	DI Blind Flange 8" w/ 2" tap	15221.405	7.00 ea	31.00 /mh	651	240.00 /ea	1,680	-	-	-	-	-	-	2,331	2,591
	DI Wall Pipe FLG x PE w/ Collar & Tapped Holes 8in x 2ft 0in long	15221.380	7.00 ea	31.00 /mh	651	900.00 /ea	6,300	-	-	-	-	-	-	6,951	7,211
	Instrumentation Roof Penetrations				1,411		9,730							11,141	11,705
	GEN General				17,273		213,898				200			231,371	238,284
	150 Influent Pump Station				17,273		213,898	/LS			200			231,371	238,284
200	Aeration Basin														
GEN	General														
150-01	1c 12042002 30" ML														
	DI Pipe 30in. dia FxF - 8ft. 0in.	15221.010	1.00 ea	31.00 /mh	248	13,000.00 /ea	13,000	-	-	-	-	-	-	13,248	13,347
	DI Pipe 30in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	372	9,000.00 /ea	9,000	-	-	-	-	-	-	9,372	9,521
	DI Flanged Tee 30"	15221.455	1.00 ea	31.00 /mh	372	25,000.00 /ea	25,000	-	-	-	-	-	-	25,372	25,521
	Link Seal Size LS-400-S	15123.100	58.00 ea	31.00 /mh	270	16.00 /ea	928	-	-	-	-	-	-	1,198	1,306
	Sleeve Steel WS-36-37-S-	15121.800	1.00 ea	31.00 /mh	186	5,300.00 /ea	5,300	-	-	-	-	-	-	5,486	5,560
	NBG Kit 125# SS 30in	15125.012	5.00 ea	31.00 /mh	620	2,100.00 /ea	10,500	-	-	-	-	-	-	11,120	11,368
	DI MEGAFLANGE w/ SS Bolts for DIP 30"	15112.230	1.00 ea	31.00 /mh	186	3,700.00 /ea	3,700	-	-	-	-	-	-	3,886	3,960
	DI Blind Flange 30"	15221.405	1.00 ea	31.00 /mh	155	5,800.00 /ea	5,800	-	-	-	-	-	-	5,955	6,017
	Grout Sleeve 36in	15124.300	1.00 ea	31.00 /mh	124	100.00 /ea	100	-	-	-	-	-	-	224	274
	30" ML				2,533		73,328							75,861	76,874
150-01	1c 12042002 ALP 304 SST														
	Link Seal Size LS-340-S	15123.100	104.00 ea	31.00 /mh	484	15.00 /ea	1,560	-	-	-	-	-	-	2,044	2,237
	Link Seal Size LS-400-S	15123.100	24.00 ea	31.00 /mh	112	16.00 /ea	384	-	-	-	-	-	-	496	540
	Link Seal Size LS-410-S	15123.100	60.00 ea	31.00 /mh	279	16.00 /ea	960	-	-	-	-	-	-	1,239	1,351
	Link Seal Size LS-475-S	15123.100	40.00 ea	31.00 /mh	186	16.00 /ea	640	-	-	-	-	-	-	826	900
	Sleeve Steel WS-8-18-S-	15121.800	2.00 ea	31.00 /mh	124	800.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	Sleeve Steel WS-10-36-S-	15121.800	3.00 ea	31.00 /mh	372	1,000.00 /ea	3,000	-	-	-	-	-	-	3,372	3,521
	Sleeve Steel WS-12-37-S-	15121.800	1.00 ea	31.00 /mh	124	1,200.00 /ea	1,200	-	-	-	-	-	-	1,324	1,374
	Sleeve Steel WS-14-37-S-	15121.800	4.00 ea	31.00 /mh	496	1,450.00 /ea	5,800	-	-	-	-	-	-	6,296	6,494
	Sleeve Steel WS-16-37-S-	15121.800	1.00 ea	31.00 /mh	155	1,600.00 /ea	1,600	-	-	-	-	-	-	1,755	1,817
	Valve Plug Flange 125# 6in	15110.650	1.00 ea	31.00 /mh	62	1,280.00 /ea	1,280	-	-	-	-	-	-	1,342	1,367
	Valve Butterfly Lugged 125# 6in	15110.026	9.00 ea	31.00 /mh	558	1,250.00 /ea	11,250	-	-	-	-	-	-	11,808	12,031
	NBG Kit 125# SS 4in	15125.012	52.00 ea	31.00 /mh	806	200.00 /ea	10,400	-	-	-	-	-	-	11,206	11,528

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 ALP 304 SST														
	PS Knee Brace for 4in DIP 24in horizontal length SS	15060.280	16.00 ea	31.00 /mh	1,984	0.01 /ea	0	-	-	-	-	-	-	1,984	2,778
	NBG Kit 125# SS 6in	15125.012	26.00 ea	31.00 /mh	806	250.00 /ea	6,500	-	-	-	-	-	-	7,306	7,628
	PS Knee Brace for 6in DIP 24in horizontal length SS	15060.280	11.00 ea	31.00 /mh	1,364	0.01 /ea	0	-	-	-	-	-	-	1,364	1,910
	NBG Kit 125# SS 10in	15125.012	24.00 ea	31.00 /mh	744	500.00 /ea	12,000	-	-	-	-	-	-	12,744	13,042
	PS Knee Brace for 8in DIP 24in horizontal length SS	15060.280	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	NBG Kit 125# SS 12in	15125.012	9.00 ea	31.00 /mh	419	500.00 /ea	4,500	-	-	-	-	-	-	4,919	5,086
	PS Knee Brace for 10in DIP 24in horizontal length SS	15060.280	34.00 ea	31.00 /mh	4,216	0.01 /ea	0	-	-	-	-	-	-	4,216	5,903
	NBG Kit 125# SS 16in	15125.012	3.00 ea	31.00 /mh	186	900.00 /ea	2,700	-	-	-	-	-	-	2,886	2,960
	PS Knee Brace for 12in DIP 24in horizontal length SS	15060.280	6.00 ea	31.00 /mh	744	0.01 /ea	0	-	-	-	-	-	-	744	1,042
	Fab Stainless Steel Pipe - 10" - *	15233.505	32.00 ea	31.00 /mh	3,968	/ea		-	-	-	-	-	-	3,968	5,555
	Fab Stainless Steel Pipe - 12" - *	15233.505	13.00 ea	31.00 /mh	2,418	/ea		-	-	-	-	-	-	2,418	3,385
	Fab Stainless Steel Pipe - 4" - *	15233.505	35.00 ea	31.00 /mh	3,255	/ea		-	-	-	-	-	-	3,255	4,557
	Fab Stainless Steel Pipe - 6" - *	15233.505	31.00 ea	31.00 /mh	2,883	/ea		-	-	-	-	-	-	2,883	4,036
	Fab Stainless Steel Pipe - 16"-.*	15233.505	3.00 ea	31.00 /mh	558	/ea		-	-	-	-	-	-	558	781
	Valve Butterfly Lugged 125# 12in	15110.026	1.00 ea	31.00 /mh	124	2,240.00 /ea	2,240	-	-	-	-	-	-	2,364	2,414
	FCV Valve Butterfly 125# 12in Elec Actuated	15110.034	1.00 ea	31.00 /mh	93	7,500.00 /ea	7,500	-	-	-	-	-	-	7,593	7,630
	NBG Kit 125# SS 8in	15125.012	4.00 ea	31.00 /mh	124	250.00 /ea	1,000	-	-	-	-	-	-	1,124	1,174
	Instrument - Flow - Magnetic Flow Meter - 12in	17200.000	1.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	Instrument - Flow - Magnetic Flow Meter - 4in	17200.000	1.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Instrument - Flow - Magnetic Flow Meter - 6in	17200.000	1.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Instrument - Flow - Magnetic Flow Meter - 10in	17200.000	1.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	FCV Valve Butterfly 125# 4in Elec Actuated	15110.034	4.00 ea	31.00 /mh	248	6,300.00 /ea	25,200	-	-	-	-	-	-	25,448	25,547
	PS Epoxy Anchor 3/4 x 8-1/2in SS	15060.112	256.00 ea	31.00 /mh	794	24.00 /ea	6,144	-	-	-	-	-	-	6,938	7,255
	FCV Valve Butterfly 125# 6in Elec Actuated	15110.034	1.00 ea	31.00 /mh	93	6,600.00 /ea	6,600	-	-	-	-	-	-	6,693	6,730
	FCV Valve Butterfly 125# 10in Elec Actuated	15110.034	1.00 ea	31.00 /mh	124	7,000.00 /ea	7,000	-	-	-	-	-	-	7,124	7,174
	Expansion Joint Flanged SS 4"	15112.070	4.00 ea	31.00 /mh	496	2,700.00 /ea	10,800	-	-	-	-	-	-	11,296	11,494
	Expansion Joint Flanged SS 6"	15112.070	3.00 ea	31.00 /mh	372	3,200.00 /ea	9,600	-	-	-	-	-	-	9,972	10,121
	Expansion Joint Flanged SS 10"	15112.070	3.00 ea	31.00 /mh	372	4,100.00 /ea	12,300	-	-	-	-	-	-	12,672	12,821
	Restrained Dismantling Joint 4" SS Bolts	15112.085	6.00 ea	31.00 /mh	372	1,000.00 /ea	6,000	-	-	-	-	-	-	6,372	6,521
	Restrained Dismantling Joint 6" SS Bolts	15112.085	4.00 ea	31.00 /mh	372	1,100.00 /ea	4,400	-	-	-	-	-	-	4,772	4,921
	Restrained Dismantling Joint 10" SS Bolts	15112.085	4.00 ea	31.00 /mh	496	3,000.00 /ea	12,000	-	-	-	-	-	-	12,496	12,694
	Restrained Dismantling Joint 12" SS Bolts	15112.085	2.00 ea	31.00 /mh	372	3,400.00 /ea	6,800	-	-	-	-	-	-	7,172	7,321
	Fab Stainless Steel Pipe - 8" - *	15233.505	4.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Valve Butterfly Lugged 125# 4in	15110.026	8.00 ea	31.00 /mh	248	1,150.00 /ea	9,200	-	-	-	-	-	-	9,448	9,547
	Valve Butterfly Lugged 125# 6in	15110.026	2.00 ea	31.00 /mh	62	1,250.00 /ea	2,500	-	-	-	-	-	-	2,562	2,587
	Valve Butterfly Lugged 125# 8in	15110.026	1.00 ea	31.00 /mh	31	1,450.00 /ea	1,450	-	-	-	-	-	-	1,481	1,493
	Valve Butterfly Lugged 125# 10in	15110.026	3.00 ea	31.00 /mh	186	1,700.00 /ea	5,100	-	-	-	-	-	-	5,286	5,360
	Valve Butterfly Lugged 125# 12in	15110.026	1.00 ea	31.00 /mh	62	2,240.00 /ea	2,240	-	-	-	-	-	-	2,302	2,327
	Grout Sleeve 8in	15124.300	2.00 ea	31.00 /mh	124	15.00 /ea	30	-	-	-	-	-	-	154	204
	Grout Sleeve 12in	15124.300	4.00 ea	31.00 /mh	372	20.00 /ea	80	-	-	-	-	-	-	452	601
	Grout Sleeve 18in	15124.300	4.00 ea	31.00 /mh	496	35.00 /ea	140	-	-	-	-	-	-	636	834
	Grout Sleeve 24in	15124.300	1.00 ea	31.00 /mh	186	75.00 /ea	75	-	-	-	-	-	-	261	335
	ALP 304 SST				35,008		203,774							238,782	252,785
	150-01 1c 12042002 2" AHP														
	Stainless Steel Pipe 2"	15212.005	680.00 lf	31.00 /mh	8,854	35.00 /lf	23,800	-	-	-	-	-	-	32,654	36,195
	Stainless Steel 90 Elbow 2"	15212.040	46.00 ea	31.00 /mh	713	610.00 /ea	28,060	-	-	-	-	-	-	28,773	29,058
	Stainless Steel 45 Elbow 2"	15212.035	16.00 ea	31.00 /mh	248	610.00 /ea	9,760	-	-	-	-	-	-	10,008	10,107
	Stainless Steel Coupling 2"	15212.025	34.00 ea	31.00 /mh	527	200.00 /ea	6,800	-	-	-	-	-	-	7,327	7,538
	PS 2 Piece Clamp SS 2in	15060.518	100.00 ea	31.00 /mh	930	7.00 /ea	700	-	-	-	-	-	-	1,630	2,002
	PS Strut Spring Nut SS 3/8"	15060.484	100.00 ea	31.00 /mh	518	9.00 /ea	945	-	-	-	-	-	-	1,463	1,670
	PS Strut SS 1-5/8 x 1-5/8	15060.476	160.00 lf	31.00 /mh	1,488	15.00 /lf	2,400	-	-	-	-	-	-	3,888	4,483
	PS Expansion Anchor 3/8 x 5in SS	15060.127	200.00 ea	31.00 /mh	930	5.00 /ea	1,000	-	-	-	-	-	-	1,930	2,302
	Valve Ball Threaded SS 2in	15110.014	7.00 ea	31.00 /mh	434	465.00 /ea	3,255	-	-	-	-	-	-	3,689	3,863
	2" AHP				14,641		76,720							91,361	97,218
	150-55 80 10" MLR														
	PVC Sch 80 PIPE 10" PE	15211.203	200.00 lf	31.00 /mh	3,100	50.00 /lf	10,000	-	-	-	-	-	-	13,100	14,340
	PVC Sch 80 90 EL 10" S	15211.207	4.00 ea	31.00 /mh	248	800.00 /ea	3,200	-	-	-	-	-	-	3,448	3,547
	PVC Sch 80 Flange Van Stone 10" Soc	15211.223	24.00 ea	31.00 /mh	1,488	180.00 /ea	4,320	-	-	-	-	-	-	5,808	6,403
	PVC Sch 80 Cement	15211.201	8.00 qt	31.00 /mh		45.00 /qt	396	-	-	-	-	-	-	396	396
	PVC Sch 80 Primer	15211.201	8.00 qt	31.00 /mh		35.00 /qt	308	-	-	-	-	-	-	308	308
	PVC Sch 80 Flange Van Stone 10" Soc	15211.223	10.00 ea	31.00 /mh	620	180.00 /ea	1,800	-	-	-	-	-	-	2,420	2,668
	NBG Kit 125# SS 10in	15125.012	17.00 ea	31.00 /mh	527	500.00 /ea	8,500	-	-	-	-	-	-	9,027	9,238
	Valve Check Flange 125# 10in	15110.040	2.00 ea	31.00 /mh	124	5,260.00 /ea	10,520	-	-	-	-	-	-	10,644	10,694
	PS Pipe Stand for 10in PVC 2ft 6in floor to CL SS	15060.408	15.00 ea	31.00 /mh	1,860	0.01 /ea	0	-	-	-	-	-	-	1,860	2,604
	PS Epoxy Anchor 3/4 x 8-1/2in SS	15060.112	60.00 ea	31.00 /mh	186	24.00 /ea	1,440	-	-	-	-	-	-	1,626	1,700
	PS Pipe Stand grout	15060.404	15.00 ea	31.00 /mh	465	8.00 /ea	120	-	-	-	-	-	-	585	771
	Grout Sleeve 18in	15124.300	5.00 ea	31.00 /mh	465	35.00 /ea	175	-	-	-	-	-	-	640	826
	Sleeve Steel WS-14-37-S-	15121.800	5.00 ea	31.00 /mh	465	1,450.00 /ea	7,250	-	-	-	-	-	-	7,715	7,901
	Link Seal Size LS-475-S	15123.100	100.00 ea	31.00 /mh	465	16.00 /ea	1,600	-	-	-	-	-	-	2,065	2,251
	10" MLR		200.00 lf		10,013		49,629	/lf						59,642	63,647
	150-55 80 1" GLY														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
150-55 80 1" GLY															
	PVC Sch 80 PIPE 1" PE	15211.203	30.00 lf	31.00 /mh	195	2.00 /lf	60	-	-	-	-	-	-	255	333
	PVC Sch 80 90 EL 1" S	15211.207	4.00 ea	31.00 /mh	26	2.10 /ea	8	-	-	-	-	-	-	34	45
	PVC Sch 80 45 EL 1" SOCxSOC	15211.208	6.00 ea	31.00 /mh	39	4.40 /ea	26	-	-	-	-	-	-	65	81
	PVC Sch 80 TEE 1" S	15211.211	1.00 ea	31.00 /mh	7	3.70 /ea	4	-	-	-	-	-	-	10	13
	PVC Sch 80 Straight CPLG 1" S	15211.204	2.00 ea	31.00 /mh	13	2.00 /ea	4	-	-	-	-	-	-	17	22
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	4.00 ea	31.00 /mh	26	4.10 /ea	16	-	-	-	-	-	-	42	53
	PVC Sch 80 Cement	15211.201	1.00 qt	31.00 /mh		45.00 /qt	50	-	-	-	-	-	-	50	50
	PVC Sch 80 Primer	15211.201	1.00 qt	31.00 /mh		35.00 /qt	39	-	-	-	-	-	-	39	39
	PVC Valve Ball True Union Viton 1" S & T	15211.310	4.00 ea	31.00 /mh	26	45.00 /ea	180	-	-	-	-	-	-	206	216
	PS Strut SS 1-5/8 x 1-5/8	15060.476	15.00 lf	31.00 /mh	140	15.00 /lf	225	-	-	-	-	-	-	365	420
	PS 2 Piece Clamp SS 1in	15060.518	10.00 ea	31.00 /mh	93	5.00 /ea	50	-	-	-	-	-	-	143	180
	PS Expansion Anchor 3/8 x 5in SS	15060.127	12.00 ea	31.00 /mh	37	5.00 /ea	60	-	-	-	-	-	-	97	112
	Valve PRV Threaded Bronze 150# 1"	15110.715	1.00 ea	31.00 /mh	62	2,550.00 /ea	2,550	-	-	-	-	-	-	2,612	2,637
	PVC Valve Ball Check True Union Viton 1" S & T	15211.330	1.00 ea	31.00 /mh	31	70.00 /ea	70	-	-	-	-	-	-	101	113
	1" GLY		30.00 lf		695		3,342	/lf						4,037	4,314
	GEN General				62,890		406,793							469,683	494,839
	200 Aeration Basin				62,890		406,793	/LS						469,683	494,839
250 Secondary Clarifier Splitter Box															
CML Ductile Iron															
0330 4- Encase 24" ML Below Splitter															
	Excavation - Mass	2317.105	50.00 cy	31.00 /mh	78	-	-	-	-	-	-	-	-	78	109
	Other Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	216.00 sf	31.00 /mh	1,674	1.50 /sf	340	-	-	-	-	-	-	2,014	2,684
	Place Pipe Encasement	3310.195	10.95 cy	31.00 /mh	363	166.00 /cy	1,946	-	-	-	-	-	-	2,309	2,454
	Nails and Hardware	3150.200	216.00 sf	31.00 /mh	0	0.04 /sf	9	-	-	-	-	-	-	9	9
	Form Ties Specialty	3150.632	14.00 ea	31.00 /mh	87	5.00 /ea	70	-	-	-	-	-	-	157	192
	Pipe Tie Downs (Medium)	3150.200	5.00 ea	31.00 /mh	775	150.00 /ea	750	-	-	-	-	-	-	1,525	1,835
	Dimension Lumber	3150.200	216.00 sf	31.00 /mh	0	0.50 /sf	108	-	-	-	-	-	-	108	108
	Oil SOG Form	3100.310	216.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Finish- Rough	3350.110	92.00 sf	31.00 /mh	26	0.01 /sf	1	-	-	-	-	-	-	26	36
	Liquid Curing Compounds	3390.170	92.00 sf	31.00 /mh	6	0.06 /sf	6	-	-	-	-	-	-	11	14
	Waterstop Adeka or Swellstop	3510.610	20.00 lf	31.00 /mh	62	8.50 /lf	179	-	-	-	-	-	-	241	265
	Encase 24" ML Below Splitter		10.95 CY		3,070		3,411	/CY						6,481	7,710
0330 4- Encase 16" ML Below Splitter (Clarifier 5)															
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	81.13 sf	31.00 /mh	629	1.50 /sf	128	-	-	-	-	-	-	756	1,008
	Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	843	896
	Nails and Hardware	3150.200	81.13 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	109
	Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	915	1,101
	Dimension Lumber	3150.200	81.13 sf	31.00 /mh	0	0.50 /sf	41	-	-	-	-	-	-	41	41
	Oil SOG Form	3100.310	81.13 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	33.00 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	9	13
	Liquid Curing Compounds	3390.170	33.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Pipe Encasement Rebar	3200.980	0.13 tn	31.00 /mh	121	1,400.00 /tn	182	-	-	-	-	-	-	303	351
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	192	212
	Encase 16" ML Below Splitter (Clarifier 5)		4.00 CY		1,458		1,701	/CY						3,159	3,742
0330 4- Encase 16" ML Below Splitter (Clarifier 6)															
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	81.13 sf	31.00 /mh	629	1.50 /sf	128	-	-	-	-	-	-	757	1,008
	Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	843	896
	Nails and Hardware	3150.200	81.13 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	109
	Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	915	1,101
	Dimension Lumber	3150.200	81.13 sf	31.00 /mh	0	0.50 /sf	41	-	-	-	-	-	-	41	41
	Oil SOG Form	3100.310	81.13 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	33.00 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	9	13
	Liquid Curing Compounds	3390.170	33.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	4	5
	Encasement Rebar	3210.104	0.13 tn	31.00 /mh	121	1,400.00 /tn	192	-	-	-	-	-	-	313	361
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	192	212
	Encase 16" ML Below Splitter (Clarifier 6)		4.00 CY		1,458		1,711	/CY						3,168	3,752
0330 4- 16" ML to Future Clarifier 7															
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	81.13 sf	31.00 /mh	629	1.50 /sf	128	-	-	-	-	-	-	756	1,008
	Place Pipe Encasement	3310.195	6.00 cy	31.00 /mh	199	166.00 /cy	1,066	-	-	-	-	-	-	1,265	1,344
	Nails and Hardware	3150.200	81.13 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	3	3
	Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	90	109
	Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	915	1,101
	Dimension Lumber	3150.200	81.13 sf	31.00 /mh	0	0.50 /sf	41	-	-	-	-	-	-	41	41
	Oil SOG Form	3100.310	81.13 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0330 4- 16" ML to Future Clarifier 7															
Finish- Rough	3350.110	33.00 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	-	9	13
Liquid Curing Compounds	3390.170	33.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	-	4	5
Encasement Rebar	3210.104	0.13 tn	31.00 /mh	121	1,400.00 /tn	192	-	-	-	-	-	-	-	313	361
Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	-	192	212
DI Pipe RJ - Class 250 16	2511.401	9.00 lf	31.00 /mh	279	90.00 /lf	891	-	-	-	-	-	-	-	1,170	1,282
DI RJ Compact 90 16	2511.514	1.00 ea	31.00 /mh	93	2,080.00 /ea	2,080	-	-	-	-	-	-	-	2,173	2,210
DI RJ Compact Cap 16	2511.510	2.00 ea	31.00 /mh	186	920.00 /ea	1,840	-	-	-	-	-	-	-	2,026	2,100
DI Floor Pipe PE x PE w/ Collar 16in x 4ft 0in long	15221.248	1.00 ea	31.00 /mh	124	1,200.00 /ea	1,200	-	-	-	-	-	-	-	1,324	1,374
Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	-	348	448
Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.15 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,275	3,500.00 /mnth	525	1,800	1,826	1,826
16" ML to Future Clarifier 7		6.00 CY		2,454		8,127	/CY				1,325		525	12,431	13,439
0330 4- 16" ML to Future Clarifier 8															
Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	-	0	0
Formwork Pipe Encasement	3100.108	81.13 sf	31.00 /mh	629	1.50 /sf	128	-	-	-	-	-	-	-	756	1,008
Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	-	843	896
Nails and Hardware	3150.200	81.13 sf	31.00 /mh	0	0.04 /sf	3	-	-	-	-	-	-	-	3	3
Form Ties Specialty	3150.632	8.00 ea	31.00 /mh	50	5.00 /ea	40	-	-	-	-	-	-	-	90	109
Pipe Tie Downs (Medium)	3150.200	3.00 ea	31.00 /mh	465	150.00 /ea	450	-	-	-	-	-	-	-	915	1,101
Dimension Lumber	3150.200	81.13 sf	31.00 /mh	0	0.50 /sf	41	-	-	-	-	-	-	-	41	41
Oil SOG Form	3100.310	81.13 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	-	2	2
Finish- Rough	3350.110	33.00 sf	31.00 /mh	9	0.01 /sf	0	-	-	-	-	-	-	-	9	13
Liquid Curing Compounds	3390.170	33.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	-	4	5
Encasement Rebar	3210.104	0.13 tn	31.00 /mh	121	1,400.00 /tn	192	-	-	-	-	-	-	-	313	361
Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	-	192	212
DI Pipe RJ - Class 250 16	2511.401	9.00 lf	31.00 /mh	279	90.00 /lf	891	-	-	-	-	-	-	-	1,170	1,282
DI RJ Compact 90 16	2511.514	1.00 ea	31.00 /mh	93	2,080.00 /ea	2,080	-	-	-	-	-	-	-	2,173	2,210
DI RJ Compact Cap 16	2511.510	2.00 ea	31.00 /mh	186	920.00 /ea	1,840	-	-	-	-	-	-	-	2,026	2,100
DI Floor Pipe PE x PE w/ Collar 16in x 4ft 0in long	15221.248	1.00 ea	31.00 /mh	124	1,200.00 /ea	1,200	-	-	-	-	-	-	-	1,324	1,374
Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	-	348	448
Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.15 mnth	-	-	-	-	-	-	8,500.00 /mnth	1,275	3,500.00 /mnth	525	1,800	1,826	1,826
16" ML to Future Clarifier 8		4.00 CY		2,388		7,771	/CY				1,325		525	12,009	12,991
CML Ductile Iron				10,828		22,721					2,650		1,050	37,249	41,633
250 Secondary Clarifier Splitter Box				10,828		22,721	/LS				2,650		1,050	37,249	41,633
300 Secondary Clarifiers 5 and 6															
CML Ductile Iron															
0330 4- Encase 16" ML Below Clarifier 5															
Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	-	0	0
Formwork Pipe Encasement	3100.108	182.90 sf	31.00 /mh	1,417	1.50 /sf	288	-	-	-	-	-	-	-	1,706	2,272
Place Pipe Encasement	3310.195	9.00 cy	31.00 /mh	299	166.00 /cy	1,599	-	-	-	-	-	-	-	1,897	2,017
Nails and Hardware	3150.200	182.90 sf	31.00 /mh	0	0.04 /sf	7	-	-	-	-	-	-	-	7	7
Form Ties Specialty	3150.632	18.00 ea	31.00 /mh	112	5.00 /ea	90	-	-	-	-	-	-	-	202	246
Pipe Tie Downs (Medium)	3150.200	10.00 ea	31.00 /mh	1,550	150.00 /ea	1,500	-	-	-	-	-	-	-	3,050	3,670
Dimension Lumber	3150.200	182.90 sf	31.00 /mh	0	0.50 /sf	91	-	-	-	-	-	-	-	92	92
Oil SOG Form	3100.310	182.90 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	-	4	4
Finish- Rough	3350.110	84.32 sf	31.00 /mh	24	0.01 /sf	1	-	-	-	-	-	-	-	24	33
Liquid Curing Compounds	3390.170	84.32 sf	31.00 /mh	5	0.06 /sf	5	-	-	-	-	-	-	-	10	12
Encasement Rebar	3210.104	0.36 tn	31.00 /mh	335	1,400.00 /tn	529	-	-	-	-	-	-	-	864	998
Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	-	192	212
Encase 16" ML Below Clarifier 5		9.00 CY		3,791		4,257	/CY							8,048	9,564
0330 4- Encase 16" ML Below Clarifier 6															
Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	-	0	0
Formwork Pipe Encasement	3100.108	182.90 sf	31.00 /mh	1,417	1.50 /sf	288	-	-	-	-	-	-	-	1,706	2,272
Place Pipe Encasement	3310.195	8.00 cy	31.00 /mh	265	166.00 /cy	1,421	-	-	-	-	-	-	-	1,686	1,792
Nails and Hardware	3150.200	182.90 sf	31.00 /mh	0	0.04 /sf	7	-	-	-	-	-	-	-	7	7
Form Ties Specialty	3150.632	18.00 ea	31.00 /mh	112	5.00 /ea	90	-	-	-	-	-	-	-	202	246
Pipe Tie Downs (Medium)	3150.200	10.00 ea	31.00 /mh	1,550	150.00 /ea	1,500	-	-	-	-	-	-	-	3,050	3,670
Dimension Lumber	3150.200	182.90 sf	31.00 /mh	0	0.50 /sf	91	-	-	-	-	-	-	-	92	92
Oil SOG Form	3100.310	182.90 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	-	4	4
Finish- Rough	3350.110	84.32 sf	31.00 /mh	24	0.01 /sf	1	-	-	-	-	-	-	-	24	33
Liquid Curing Compounds	3390.170	84.32 sf	31.00 /mh	5	0.06 /sf	5	-	-	-	-	-	-	-	10	12
Encasement Rebar	3210.104	0.36 tn	31.00 /mh	335	1,400.00 /tn	529	-	-	-	-	-	-	-	864	998
Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	50	8.50 /lf	143	-	-	-	-	-	-	-	192	212
Encase 16" ML Below Clarifier 6		8.00 CY		3,758		4,079	/CY							7,837	9,340
0330 4- Encase 8" RAS Below Clarifier 5															
Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	-	0	0
Formwork Pipe Encasement	3100.108	148.30 sf	31.00 /mh	1,149	1.50 /sf	234	-	-	-	-	-	-	-	1,383	1,843
Place Pipe Encasement	3310.195	8.00 cy	31.00 /mh	265	166.00 /cy	1,421	-	-	-	-	-	-	-	1,686	1,792
Nails and Hardware	3150.200	148.30 sf	31.00 /mh	0	0.04 /sf	6	-	-	-	-	-	-	-	6	6
Form Ties Specialty	3150.632	18.00 ea	31.00 /mh	112	5.00 /ea	90	-	-	-	-	-	-	-	202	246
Pipe Tie Downs (Small)	3150.200	9.00 ea	31.00 /mh	1,116	75.00 /ea	675	-	-	-	-	-	-	-	1,791	2,237

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0330	4- Encase 8" RAS Below Clarifier 5														
	Dimension Lumber	3150.200	148.30 sf	31.00 /mh	0	0.50 /sf	74	-	-	-	-	-	-	74	74
	Oil SOG Form	3100.310	148.30 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3
	Finish- Rough	3350.110	69.44 sf	31.00 /mh	19	0.01 /sf	0	-	-	-	-	-	-	20	28
	Liquid Curing Compounds	3390.170	69.44 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	8	10
	Encasement Rebar	3210.104	0.35 tn	31.00 /mh	326	1,400.00 /tn	515	-	-	-	-	-	-	841	971
	Waterstop Adeka or Swellstop	3510.610	12.00 lf	31.00 /mh	37	8.50 /lf	107	-	-	-	-	-	-	144	159
	Encase 8" RAS Below Clarifier 5		8.00 CY		3,029		3,129	/CY						6,158	7,370
0330	4- Encase 8" RAS Below Clarifier 6														
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	148.30 sf	31.00 /mh	1,149	1.50 /sf	234	-	-	-	-	-	-	1,383	1,843
	Place Pipe Encasement	3310.195	8.00 cy	31.00 /mh	265	166.00 /cy	1,421	-	-	-	-	-	-	1,686	1,792
	Nails and Hardware	3150.200	148.30 sf	31.00 /mh	0	0.04 /sf	6	-	-	-	-	-	-	6	6
	Form Ties Specialty	3150.632	18.00 ea	31.00 /mh	112	5.00 /ea	90	-	-	-	-	-	-	202	246
	Pipe Tie Downs (Small)	3150.200	9.00 ea	31.00 /mh	1,116	75.00 /ea	675	-	-	-	-	-	-	1,791	2,237
	Dimension Lumber	3150.200	148.30 sf	31.00 /mh	0	0.50 /sf	74	-	-	-	-	-	-	74	74
	Oil SOG Form	3100.310	148.30 sf	31.00 /mh	0	0.02 /sf	3	-	-	-	-	-	-	3	3
	Finish- Rough	3350.110	69.44 sf	31.00 /mh	19	0.01 /sf	0	-	-	-	-	-	-	20	28
	Liquid Curing Compounds	3390.170	69.44 sf	31.00 /mh	4	0.06 /sf	4	-	-	-	-	-	-	8	10
	Encasement Rebar	3210.104	0.35 tn	31.00 /mh	326	1,400.00 /tn	515	-	-	-	-	-	-	841	971
	Waterstop Adeka or Swellstop	3510.610	12.00 lf	31.00 /mh	33	8.50 /lf	107	-	-	-	-	-	-	141	154
	Encase 8" RAS Below Clarifier 6		8.00 CY		3,025		3,129	/CY						6,155	7,365
	CML Ductile Iron				13,603		14,595							28,197	33,638
GEN	General														
150-01	1c 12042002 4" Scum in Clarifiers														
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	4.00 ea	31.00 /mh	372	560.00 /ea	2,240	-	-	-	-	-	-	2,612	2,761
	DI Pipe 4in. dia FxPE - 3ft. 0in.	15221.030	2.00 ea	31.00 /mh	186	350.00 /ea	700	-	-	-	-	-	-	886	960
	DI Pipe 4in. dia FxPE - 6ft. 0in.	15221.030	2.00 ea	31.00 /mh	248	600.00 /ea	1,200	-	-	-	-	-	-	1,448	1,547
	DI Flanged 90 ell 4"	15221.430	4.00 ea	31.00 /mh	124	200.00 /ea	800	-	-	-	-	-	-	924	974
	DI Flanged 45 ell 4"	15221.425	4.00 ea	31.00 /mh	124	200.00 /ea	800	-	-	-	-	-	-	924	974
	Link Seal Size LS-475-S	15123.100	32.00 ea	31.00 /mh	149	16.00 /ea	512	-	-	-	-	-	-	661	720
	Sleeve Plastic CS-8-	15121.600	2.00 ea	31.00 /mh	62	150.00 /ea	300	-	-	-	-	-	-	362	387
	PS Special Support	15060.475	2.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	NBG Kit 125# SS 4in	15125.012	20.00 ea	31.00 /mh	186	200.00 /ea	4,000	-	-	-	-	-	-	4,186	4,260
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	4.00 ea	31.00 /mh	186	200.00 /ea	800	-	-	-	-	-	-	986	1,060
	Grout Sleeve 8in	15124.300	2.00 ea	31.00 /mh	124	15.00 /ea	30	-	-	-	-	-	-	154	204
	PS Expansion Anchor 5/8 x 7in SS	15060.127	8.00 ea	31.00 /mh	25	14.00 /ea	112	-	-	-	-	-	-	137	147
	4" Scum in Clarifiers				1,972		11,494							13,466	14,254
150-55	80 1-1/2" Spray Bar														
	PVC Sch 80 PIPE 1.5" PE	15211.203	60.00 lf	31.00 /mh	391	3.00 /lf	180	-	-	-	-	-	-	571	727
	PVC Sch 80 90 EL 1.5" S	15211.207	4.00 ea	31.00 /mh	26	3.00 /ea	12	-	-	-	-	-	-	38	48
	PVC Sch 80 45 EL 1.5" SOCxSOC	15211.208	8.00 ea	31.00 /mh	52	6.60 /ea	53	-	-	-	-	-	-	105	126
	PVC Sch 80 TEE 1.5" S	15211.211	10.00 ea	31.00 /mh	65	10.20 /ea	102	-	-	-	-	-	-	167	193
	PVC Sch 80 Straight CPLG 1.5" S	15211.204	4.00 ea	31.00 /mh	26	3.00 /ea	12	-	-	-	-	-	-	38	48
	PVC Sch 80 MALE ADPT 1.5" SXMT	15211.217	10.00 ea	31.00 /mh	65	6.80 /ea	68	-	-	-	-	-	-	133	159
	PVC Sch 80 Cement	15211.201	4.00 qt	31.00 /mh		45.00 /qt	198	-	-	-	-	-	-	198	198
	PVC Sch 80 Primer	15211.201	4.00 qt	31.00 /mh		35.00 /qt	154	-	-	-	-	-	-	154	154
	PVC Sch 80 EPDM UNION 1.5" S	15211.219	10.00 ea	31.00 /mh	65	12.00 /ea	120	-	-	-	-	-	-	185	211
	PVC Valve Ball True Union Viton 1.5" S & T	15211.310	6.00 ea	31.00 /mh	39	70.00 /ea	420	-	-	-	-	-	-	459	475
	PS Strut SS 1-5/8 x 1-5/8	15060.476	30.00 lf	31.00 /mh	279	15.00 /lf	450	-	-	-	-	-	-	729	841
	PS 2 Piece Clamp SS 1-½in	15060.518	14.00 ea	31.00 /mh	130	7.00 /ea	98	-	-	-	-	-	-	228	280
	PS Expansion Anchor 3/8 x 5in SS	15060.127	28.00 ea	31.00 /mh	87	5.00 /ea	140	-	-	-	-	-	-	227	262
	1-1/2" Spray Nozzle	15112.010	10.00 ea	31.00 /mh	310	15.00 /ea	150	-	-	-	-	-	-	460	584
	1-1/2" Spray Bar		60.00 lf		1,535		2,157	/lf						3,692	4,306
	GEN General				3,507		13,651							17,158	18,560
	300 Secondary Clarifiers 5 and 6				17,109		28,246	/LS						45,355	52,198
350	Step Feed Process Building														
GEN	General														
02643-1-	8" RAS from Clarifiers 5 & 6 Underslab														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 4- 6'	2333.010	60.00 lf	31.00 /mh	335	-	-	-	-	-	-	-	-	335	469
	Trench Backfill 4- 6'	2333.020	60.00 lf	31.00 /mh	465	-	-	-	-	-	-	-	-	465	651
	Spoils to Waste	2333.060	35.56 cy	31.00 /mh	110	-	-	-	-	-	-	-	-	110	154
	DI Pipe RJ - Class 350 8	2511.401	60.00 lf	31.00 /mh	279	37.00 /lf	2,442	-	-	-	-	-	-	2,721	2,833
	DI RJ Compact Solid Sleeve Short 8	2511.523	2.00 ea	31.00 /mh	124	520.00 /ea	1,040	-	-	-	-	-	-	1,164	1,214
	Polybag 12" and Smaller	2333.090	60.00 lf	31.00 /mh	19	0.75 /lf	50	-	-	-	-	-	-	68	76
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 mnth	-	-	-	-	-	-	8,500.00 /mnth	425	3,500.00 /mnth	175	600	609
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 mnth	-	-	-	-	-	-	5,500.00 /mnth	275	3,000.00 /mnth	150	425	431
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 mnth	-	-	-	-	-	-	4,500.00 /mnth	225	1,200.00 /mnth	60	285	290
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 mnth	-	-	-	-	-	-	200.00 /mnth	10	100.00 /mnth	5	15	15
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 mnth	-	-	-	-	-	-	2,000.00 /mnth	100	300.00 /mnth	15	115	117

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	8" RAS from Clarifiers 5 & 6 Underslab		60.00 lf		1,828		3,632	/lf			1,135		405	6,999	7,753
02643-1-	4" Scum Underslab														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 4- 6'	2333.010	30.00 lf	31.00 /mh	167	-	-	-	-	-	-	-	-	167	234
	Trench Backfill 4- 6'	2333.020	30.00 lf	31.00 /mh	233	-	-	-	-	-	-	-	-	233	325
	Spoils to Waste	2333.060	16.67 cy	31.00 /mh	52	-	-	-	-	-	-	-	-	52	72
	DI Pipe RJ - Class 350 4 Glass Line	2511.401	30.00 lf	31.00 /mh	93	76.00 /lf	2,508	-	-	-	-	-	-	2,601	2,638
	DI RJ Compact Solid Sleeve Short 4 Glass Lined	2511.523	1.00 ea	31.00 /mh	62	780.00 /ea	780	-	-	-	-	-	-	842	867
	Polybag 12" and Smaller	2333.090	30.00 lf	31.00 /mh	9	0.75 /lf	25	-	-	-	-	-	-	34	38
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 mnth	-	-	-	-	-	-	8,500.00 /mnth	119	3,500.00 /mnth	49	168	170
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 mnth	-	-	-	-	-	-	5,500.00 /mnth	77	3,000.00 /mnth	42	119	121
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 mnth	-	-	-	-	-	-	4,500.00 /mnth	32	1,200.00 /mnth	8	40	41
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 mnth	-	-	-	-	-	-	200.00 /mnth	1	100.00 /mnth	1	2	2
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 mnth	-	-	-	-	-	-	2,000.00 /mnth	14	300.00 /mnth	2	16	16
	4" Scum Underslab		30.00 lf		864		3,363	/lf			293		102	4,622	4,973
02643-1-	10" RAS Discharge Underslab														
	Trench Excavtion 4- 6'	2333.010	30.00 lf	31.00 /mh	167	-	-	-	-	-	-	-	-	167	234
	Trench Backfill 4- 6'	2333.020	30.00 lf	31.00 /mh	233	-	-	-	-	-	-	-	-	233	325
	Spoils to Waste	2333.060	16.67 cy	31.00 /mh	52	-	-	-	-	-	-	-	-	52	72
	DI Pipe RJ - Class 350 10	2511.401	30.00 lf	31.00 /mh	112	45.00 /lf	1,485	-	-	-	-	-	-	1,597	1,641
	DI RJ Compact Solid Sleeve Short 10	2511.523	1.00 ea	31.00 /mh	93	780.00 /ea	780	-	-	-	-	-	-	873	910
	Polybag 12" and Smaller	2333.090	30.00 lf	31.00 /mh	9	0.75 /lf	25	-	-	-	-	-	-	34	38
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 mnth	-	-	-	-	-	-	8,500.00 /mnth	119	3,500.00 /mnth	49	168	170
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 mnth	-	-	-	-	-	-	5,500.00 /mnth	77	3,000.00 /mnth	42	119	121
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 mnth	-	-	-	-	-	-	4,500.00 /mnth	32	1,200.00 /mnth	8	40	41
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 mnth	-	-	-	-	-	-	200.00 /mnth	1	100.00 /mnth	1	2	2
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 mnth	-	-	-	-	-	-	2,000.00 /mnth	14	300.00 /mnth	2	16	16
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	10" RAS Discharge Underslab		30.00 lf		913		2,340	/lf			293		102	3,648	4,020
02643-1-	4" WAS Discharge Underslab														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 4- 6'	2333.010	30.00 lf	31.00 /mh	140	-	-	-	-	-	-	-	-	140	195
	Trench Backfill 4- 6'	2333.020	30.00 lf	31.00 /mh	233	-	-	-	-	-	-	-	-	233	325
	Spoils to Waste	2333.060	16.67 cy	31.00 /mh	52	-	-	-	-	-	-	-	-	52	72
	DI Pipe RJ - Class 350 4	2511.401	30.00 lf	31.00 /mh	93	35.00 /lf	1,155	-	-	-	-	-	-	1,248	1,285
	DI RJ Compact Solid Sleeve Short 4	2511.523	1.00 ea	31.00 /mh	31	290.00 /ea	290	-	-	-	-	-	-	321	333
	Polybag 12" and Smaller	2333.090	30.00 lf	31.00 /mh	9	0.75 /lf	25	-	-	-	-	-	-	34	38
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 mnth	-	-	-	-	-	-	8,500.00 /mnth	119	3,500.00 /mnth	49	168	170
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 mnth	-	-	-	-	-	-	5,500.00 /mnth	77	3,000.00 /mnth	42	119	121
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 mnth	-	-	-	-	-	-	4,500.00 /mnth	32	1,200.00 /mnth	8	40	41
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 mnth	-	-	-	-	-	-	200.00 /mnth	1	100.00 /mnth	1	2	2
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 mnth	-	-	-	-	-	-	2,000.00 /mnth	14	300.00 /mnth	2	16	16
	4" WAS Discharge Underslab		30.00 lf		805		1,520	/lf			293		102	2,720	3,048
02643-1-	4" DS Underslab														
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	31.00 /mh	496	50.00 /ea	100	-	-	50.00 /ea	100	-	-	696	896
	Trench Excavtion 4- 6'	2333.010	100.00 lf	31.00 /mh	465	-	-	-	-	-	-	-	-	465	651
	Trench Backfill 4- 6'	2333.020	100.00 lf	31.00 /mh	775	-	-	-	-	-	-	-	-	775	1,085
	Spoils to Waste	2333.060	55.56 cy	31.00 /mh	172	-	-	-	-	-	-	-	-	172	241
	DI Pipe RJ - Class 350 4	2511.401	100.00 lf	31.00 /mh	310	35.00 /lf	3,850	-	-	-	-	-	-	4,160	4,284
	DI RJ Compact 90 4	2511.514	10.00 ea	31.00 /mh	620	300.00 /ea	3,000	-	-	-	-	-	-	3,620	3,868
	DI RJ Compact Solid Sleeve Short 4	2511.523	1.00 ea	31.00 /mh	62	290.00 /ea	290	-	-	-	-	-	-	352	377
	Polybag 12" and Smaller	2333.090	100.00 lf	31.00 /mh	31	0.75 /lf	83	-	-	-	-	-	-	114	126
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 mnth	-	-	-	-	-	-	8,500.00 /mnth	383	3,500.00 /mnth	158	540	548
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 mnth	-	-	-	-	-	-	5,500.00 /mnth	248	3,000.00 /mnth	135	383	387
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 mnth	-	-	-	-	-	-	4,500.00 /mnth	104	1,200.00 /mnth	28	131	133
	Mikasa Jumping Jack Compactor (L)	1900.138	0.02 mnth	-	-	-	-	-	-	200.00 /mnth	5	100.00 /mnth	2	7	7
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 mnth	-	-	-	-	-	-	2,000.00 /mnth	46	300.00 /mnth	7	53	54
	DI Floor Pipe FLG x MJ w/ Collar 4in x 3ft 0in long	15221.232	5.00 ea	31.00 /mh	465	1,100.00 /ea	5,500	-	-	-	-	-	-	5,965	6,151
	4" DS Underslab		100.00 lf		3,396		12,823	/lf			884		329	17,432	18,808
02643-1-	4" SPP Underslab														
	Trench Excavtion 4- 6'	2333.010	50.00 lf	31.00 /mh	279	-	-	-	-	-	-	-	-	279	391
	Trench Backfill 4- 6'	2333.020	50.00 lf	31.00 /mh	388	-	-	-	-	-	-	-	-	388	543
	Spoils to Waste	2333.060	29.63 cy	31.00 /mh	92	-	-	-	-	-	-	-	-	92	129
	DI Pipe RJ - Class 350 4	2511.401	50.00 lf	31.00 /mh	233	35.00 /lf	1,925	-	-	-	-	-	-	2,158	2,251
	DI RJ Compact 45 4	2511.514	3.00 ea	31.00 /mh	186	280.00 /ea	840	-	-	-	-	-	-	1,026	1,100
	DI RJ Compact Wye 4	2511.528	1.00 ea	31.00 /mh	93	506.00 /ea	506	-	-	-	-	-	-	599	636
	DI RJ Compact Solid Sleeve Short 4	2511.523	1.00 ea	31.00 /mh	124	290.00 /ea	290	-	-	-	-	-	-	414	464
	Polybag 12" and Smaller	2333.090	50.00 lf	31.00 /mh	16	0.75 /lf	41	-	-	-	-	-	-	57	63
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 mnth	-	-	-	-	-	-	8,500.00 /mnth	196	3,500.00 /mnth	81	276	280
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 mnth	-	-	-	-	-	-	5,500.00 /mnth	127	3,000.00 /mnth	69	196	198
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 mnth	-	-	-	-	-	-	4,500.00 /mnth	50	1,200.00 /mnth	13	63	64
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 mnth	-	-	-	-	-	-	200.00 /mnth	2	100.00 /mnth	1	3	3

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02643-1-	4" SPP Underslab														
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 mnth	-	-	-	-	-	-	2,000.00 /mnth	22	300.00 /mnth	3	25	26
	DI Floor Pipe FLG x MJ w/ Collar 4in x 3ft 0in long	15221.232	2.00 ea	31.00 /mh	310	1,100.00 /ea	2,200	-	-	-	-	-	-	2,510	2,634
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	4" SPP Underslab		50.00 lf		1,967		5,852	/lf			446		167	8,432	9,228
0330 4-	8" RAS from Clarifiers 5 & 6 Underslab Encasement														
	Formwork Pipe Encasement	3100.108	420.00 sf	31.00 /mh	3,255	1.50 /sf	662	-	-	-	-	-	-	3,917	5,219
	Place Pipe Encasement	3310.195	37.00 cy	31.00 /mh	1,227	166.00 /cy	6,572	-	-	-	-	-	-	7,799	8,290
	Nails and Hardware	3150.200	420.00 sf	31.00 /mh	0	0.04 /sf	17	-	-	-	-	-	-	17	17
	Form Ties Specialty	3150.632	34.00 ea	31.00 /mh	211	5.00 /ea	170	-	-	-	-	-	-	381	465
	Pipe Tie Downs (Small)	3150.200	18.00 ea	31.00 /mh	2,232	75.00 /ea	1,350	-	-	-	-	-	-	3,582	4,475
	Dimension Lumber	3150.200	420.00 sf	31.00 /mh	0	0.50 /sf	210	-	-	-	-	-	-	210	210
	Oil SOG Form	3100.310	420.00 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	9	9
	Finish- Rough	3350.110	300.00 sf	31.00 /mh	84	0.01 /sf	2	-	-	-	-	-	-	86	119
	Liquid Curing Compounds	3390.170	300.00 sf	31.00 /mh	19	0.06 /sf	18	-	-	-	-	-	-	37	44
	Encasement Rebar	3210.104	2.77 tn	31.00 /mh	2,147	1,400.00 /tn	4,073	-	-	-	-	-	-	6,219	7,078
	8" RAS from Clarifiers 5 & 6 Underslab Encasement		37.00 CY		9,175		13,081	/CY						22,256	25,925
0330 4-	4" Scum Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	210.00 sf	31.00 /mh	1,628	1.50 /sf	331	-	-	-	-	-	-	1,958	2,609
	Place Pipe Encasement	3310.195	15.00 cy	31.00 /mh	498	166.00 /cy	2,664	-	-	-	-	-	-	3,162	3,361
	Nails and Hardware	3150.200	210.00 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Form Ties Specialty	3150.632	17.00 ea	31.00 /mh	105	5.00 /ea	85	-	-	-	-	-	-	190	233
	Pipe Tie Downs (Small)	3150.200	9.00 ea	31.00 /mh	1,116	75.00 /ea	675	-	-	-	-	-	-	1,791	2,237
	Dimension Lumber	3150.200	210.00 sf	31.00 /mh	0	0.50 /sf	105	-	-	-	-	-	-	105	105
	Oil SOG Form	3100.310	210.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Finish- Rough	3350.110	150.00 sf	31.00 /mh	42	0.01 /sf	1	-	-	-	-	-	-	43	59
	Liquid Curing Compounds	3390.170	150.00 sf	31.00 /mh	9	0.06 /sf	9	-	-	-	-	-	-	18	22
	Encasement Rebar	3210.104	1.25 tn	31.00 /mh	969	1,400.00 /tn	1,838	-	-	-	-	-	-	2,807	3,194
	4" Scum Underslab Encasement		15.00 CY		4,367		5,721	/CY						10,087	11,834
0330 4-	10" RAS Discharge Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	210.00 sf	31.00 /mh	1,628	1.50 /sf	331	-	-	-	-	-	-	1,958	2,609
	Place Pipe Encasement	3310.195	19.00 cy	31.00 /mh	630	166.00 /cy	3,375	-	-	-	-	-	-	4,005	4,257
	Nails and Hardware	3150.200	210.00 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Form Ties Specialty	3150.632	17.00 ea	31.00 /mh	105	5.00 /ea	85	-	-	-	-	-	-	190	233
	Pipe Tie Downs (Small)	3150.200	9.00 ea	31.00 /mh	1,116	75.00 /ea	675	-	-	-	-	-	-	1,791	2,237
	Dimension Lumber	3150.200	210.00 sf	31.00 /mh	0	0.50 /sf	105	-	-	-	-	-	-	105	105
	Oil SOG Form	3100.310	210.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Finish- Rough	3350.110	150.00 sf	31.00 /mh	42	0.01 /sf	1	-	-	-	-	-	-	43	59
	Liquid Curing Compounds	3390.170	150.00 sf	31.00 /mh	9	0.06 /sf	9	-	-	-	-	-	-	18	22
	Encasement Rebar	3210.104	1.42 tn	31.00 /mh	1,101	1,400.00 /tn	2,087	-	-	-	-	-	-	3,188	3,628
	10" RAS Discharge Underslab Encasement		19.00 CY		4,631		6,680	/CY						11,311	13,164
0330 4-	4" WAS Discharge Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	210.00 sf	31.00 /mh	1,628	1.50 /sf	331	-	-	-	-	-	-	1,958	2,609
	Place Pipe Encasement	3310.195	16.57 cy	31.00 /mh	550	166.00 /cy	2,943	-	-	-	-	-	-	3,493	3,713
	Nails and Hardware	3150.200	210.00 sf	31.00 /mh	0	0.04 /sf	8	-	-	-	-	-	-	8	8
	Form Ties Specialty	3150.632	17.00 ea	31.00 /mh	105	5.00 /ea	85	-	-	-	-	-	-	190	233
	Pipe Tie Downs (Small)	3150.200	9.00 ea	31.00 /mh	1,116	75.00 /ea	675	-	-	-	-	-	-	1,791	2,237
	Dimension Lumber	3150.200	210.00 sf	31.00 /mh	0	0.50 /sf	105	-	-	-	-	-	-	105	105
	Oil SOG Form	3100.310	210.00 sf	31.00 /mh	0	0.02 /sf	4	-	-	-	-	-	-	4	4
	Finish- Rough	3350.110	150.00 sf	31.00 /mh	42	0.01 /sf	1	-	-	-	-	-	-	43	59
	Liquid Curing Compounds	3390.170	150.00 sf	31.00 /mh	9	0.06 /sf	9	-	-	-	-	-	-	18	22
	Encasement Rebar	3210.104	1.20 tn	31.00 /mh	930	1,400.00 /tn	1,764	-	-	-	-	-	-	2,694	3,066
	4" WAS Discharge Underslab Encasement		16.57 CY		4,380		5,925	/CY						10,305	12,057
0330 4-	4" DS Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	832.00 sf	31.00 /mh	6,448	1.50 /sf	1,310	-	-	-	-	-	-	7,758	10,338
	Place Pipe Encasement	3310.195	23.00 cy	31.00 /mh	763	166.00 /cy	4,085	-	-	-	-	-	-	4,848	5,153
	Nails and Hardware	3150.200	832.00 sf	31.00 /mh	0	0.04 /sf	33	-	-	-	-	-	-	34	34
	Form Ties Specialty	3150.632	52.00 ea	31.00 /mh	322	5.00 /ea	260	-	-	-	-	-	-	582	711
	Pipe Tie Downs (Small)	3150.200	26.00 ea	31.00 /mh	3,224	75.00 /ea	1,950	-	-	-	-	-	-	5,174	6,464
	Dimension Lumber	3150.200	832.00 sf	31.00 /mh	0	0.50 /sf	416	-	-	-	-	-	-	416	416
	Oil SOG Form	3100.310	832.00 sf	31.00 /mh	0	0.02 /sf	17	-	-	-	-	-	-	17	17
	Finish- Rough	3350.110	400.00 sf	31.00 /mh	112	0.01 /sf	2	-	-	-	-	-	-	114	159
	Liquid Curing Compounds	3390.170	400.00 sf	31.00 /mh	25	0.06 /sf	24	-	-	-	-	-	-	49	59
	Encasement Rebar	3210.104	1.72 tn	31.00 /mh	1,333	1,400.00 /tn	2,528	-	-	-	-	-	-	3,861	4,395
	4" DS Underslab Encasement		58.94 CY		12,227		10,626	/CY						22,854	27,745
0330 4-	4" SPP Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0330	4- 4" SPP Underslab Encasement														
	Formwork Pipe Encasement	3100.108	432.00 sf	31.00 /mh	3,348	1.50 /sf	680	-	-	-	-	-	-	4,028	5,368
	Place Pipe Encasement	3310.195	13.00 cy	31.00 /mh	431	166.00 /cy	2,309	-	-	-	-	-	-	2,740	2,913
	Nails and Hardware	3150.200	432.00 sf	31.00 /mh	0	0.04 /sf	17	-	-	-	-	-	-	17	17
	Form Ties Specialty	3150.632	27.00 ea	31.00 /mh	167	5.00 /ea	135	-	-	-	-	-	-	302	369
	Pipe Tie Downs (Small)	3150.200	14.00 ea	31.00 /mh	1,736	75.00 /ea	1,050	-	-	-	-	-	-	2,786	3,480
	Dimension Lumber	3150.200	432.00 sf	31.00 /mh	0	0.50 /sf	216	-	-	-	-	-	-	216	216
	Oil SOG Form	3100.310	432.00 sf	31.00 /mh	0	0.02 /sf	9	-	-	-	-	-	-	9	9
	Finish- Rough	3350.110	200.00 sf	31.00 /mh	56	0.01 /sf	1	-	-	-	-	-	-	57	79
	Liquid Curing Compounds	3390.170	200.00 sf	31.00 /mh	12	0.06 /sf	12	-	-	-	-	-	-	24	29
	Encasement Rebar	3210.104	0.97 tn	31.00 /mh	752	1,400.00 /tn	1,427	-	-	-	-	-	-	2,178	2,479
	4" SPP Underslab Encasement		29.47 CY		6,503		5,856	/CY						12,359	14,960
150-01	1c 12042002 8" RAS Pump Suction														
	DI Pipe 8in. dia FxF - 3ft. 0in.	15221.010	1.00 ea	31.00 /mh	47	1,000.00 /ea	1,000	-	-	-	-	-	-	1,047	1,065
	DI Pipe 4in. dia FxF - 2ft. 1in. w/ 1" tap	15221.010	2.00 ea	31.00 /mh	62	675.00 /ea	1,350	-	-	-	-	-	-	1,412	1,437
	DI Pipe 8in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	93	1,100.00 /ea	2,200	-	-	-	-	-	-	2,293	2,330
	DI Pipe 8in. dia FxF - 9ft. 0in.	15221.010	3.00 ea	31.00 /mh	140	1,500.00 /ea	4,500	-	-	-	-	-	-	4,640	4,695
	DI Pipe 8in. dia FxPE - 3ft. 0in.	15221.030	2.00 ea	31.00 /mh	93	650.00 /ea	1,300	-	-	-	-	-	-	1,393	1,430
	DI Pipe 8in. dia FxPE - 6ft. 0in.	15221.030	3.00 ea	31.00 /mh	140	900.00 /ea	2,700	-	-	-	-	-	-	2,840	2,895
	DI Pipe 8in. dia FxPE - 7ft. 0in.	15221.030	2.00 ea	31.00 /mh	93	1,000.00 /ea	2,000	-	-	-	-	-	-	2,093	2,130
	DI Flanged Tee 8"	15221.455	7.00 ea	31.00 /mh	434	1,100.00 /ea	7,700	-	-	-	-	-	-	8,134	8,308
	DI Flanged Tee 4"	15221.455	1.00 ea	31.00 /mh	47	300.00 /ea	300	-	-	-	-	-	-	347	365
	DI Flanged Con Red 6x4"	15221.445	3.00 ea	31.00 /mh	93	300.00 /ea	900	-	-	-	-	-	-	993	1,030
	DI Flanged Con Red 8x4"	15221.445	2.00 ea	31.00 /mh	93	300.00 /ea	600	-	-	-	-	-	-	693	730
	DI Flanged Con Red 8x6"	15221.445	3.00 ea	31.00 /mh	140	350.00 /ea	1,050	-	-	-	-	-	-	1,190	1,245
	Link Seal Size LS-400-S	15123.100	36.00 ea	31.00 /mh	167	16.00 /ea	576	-	-	-	-	-	-	743	810
	Sleeve Plastic CS-12-	15121.600	2.00 ea	31.00 /mh	62	190.00 /ea	380	-	-	-	-	-	-	442	467
	Valve Plug Flange 125# 4in	15110.650	3.00 ea	31.00 /mh	93	1,200.00 /ea	3,600	-	-	-	-	-	-	3,693	3,730
	Valve Plug Flange 125# 6in	15110.650	3.00 ea	31.00 /mh	93	1,280.00 /ea	3,840	-	-	-	-	-	-	3,933	3,970
	Valve Plug Flange 125# 8in	15110.650	2.00 ea	31.00 /mh	124	1,690.00 /ea	3,380	-	-	-	-	-	-	3,504	3,554
	PS Pipe Stand for 8in DIP 3ft 0in floor to CL HDG	15060.406	6.00 ea	31.00 /mh	372	0.01 /ea	0	-	-	-	-	-	-	372	521
	NBG Kit 125# Steel 4in [EPDM gaskets, heavy hex, Steel = EG, SS = 316SS]	15125.010	18.00 ea	31.00 /mh	167	25.00 /ea	450	-	-	-	-	-	-	617	684
	NBG Kit 125# Steel 6in	15125.010	6.00 ea	31.00 /mh	56	40.00 /ea	240	-	-	-	-	-	-	296	318
	NBG Kit 125# Steel 8in	15125.010	28.00 ea	31.00 /mh	260	50.00 /ea	1,400	-	-	-	-	-	-	1,660	1,765
	DI MEGAFLANGE w/ Galv Bolts for DIP 8"	15112.220	5.00 ea	31.00 /mh	465	215.00 /ea	1,075	-	-	-	-	-	-	1,540	1,726
	DI Blind Flange 8"	15221.405	2.00 ea	31.00 /mh	93	200.00 /ea	400	-	-	-	-	-	-	493	530
	PS Expansion Anchor 3/4 x 7in SS	15060.127	32.00 ea	31.00 /mh	50	17.00 /ea	544	-	-	-	-	-	-	594	613
	PS Pipe Stand grout	15060.404	6.00 ea	31.00 /mh	93	8.00 /ea	48	-	-	-	-	-	-	141	178
	Grout Sleeve 12in	15124.300	5.00 ea	31.00 /mh	310	20.00 /ea	100	-	-	-	-	-	-	410	534
	DI MEGALUG for DIP 8"	2511.610	5.00 ea	31.00 /mh	78	45.00 /ea	225	-	-	-	-	-	-	303	334
	FCA for DIP 8"	15112.090	1.00 ea	31.00 /mh	124	1,500.00 /ea	1,500	-	-	-	-	-	-	1,624	1,674
	Restrained Dismantling Joint 8" EG Bolts	15112.085	1.00 ea	31.00 /mh	124	1,400.00 /ea	1,400	-	-	-	-	-	-	1,524	1,574
	Instrument - Pressure - Gauge	17400.000	3.00 ea	31.00 /mh	93	1,200.00 /ea	3,600	-	-	-	-	-	-	3,693	3,730
	Instrument - Pressure - Transmitter	17400.000	3.00 ea	31.00 /mh	93	0.01 /ea	0	-	-	-	-	-	-	93	130
	Stainless Steel Nipple 1" x 3"	15212.010	4.00 ea	31.00 /mh	31	8.00 /ea	32	-	-	-	-	-	-	63	75
	Valve Ball Threaded SS 1in	15110.014	2.00 ea	31.00 /mh	54	179.00 /ea	358	-	-	-	-	-	-	412	434
	Water Tap Saddle 8 x 2"	2519.424	1.00 ea	31.00 /mh	19	106.00 /ea	106	-	-	-	-	-	-	125	132
	Valve Air Release 2in	15110.005	1.00 ea	31.00 /mh	44	4,600.00 /ea	4,600	-	-	-	-	-	-	4,644	4,661
	Stainless Steel Nipple 2" X 3"	15212.010	2.00 ea	31.00 /mh	20	15.00 /ea	30	-	-	-	-	-	-	50	59
	Valve Ball Threaded SS 2in	15110.014	2.00 ea	31.00 /mh	87	465.00 /ea	930	-	-	-	-	-	-	1,017	1,052
	8" RAS Pump Suction				4,645		54,414							59,059	60,917
150-01	1c 12042002 4" Scum Suction														
	DI Pipe 4in. dia FxF - 2ft. 1in. w/ 1" tap Glass Lined	15221.010	1.00 ea	31.00 /mh	62	830.00 /ea	830	-	-	-	-	-	-	892	917
	DI Pipe 4in. dia FxF - 4ft. 0in. Glass Lined	15221.010	1.00 ea	31.00 /mh	62	800.00 /ea	800	-	-	-	-	-	-	862	887
	DI Pipe 4in. dia FxF - 10ft. 0in. Glass Lined	15221.010	1.00 ea	31.00 /mh	93	1,500.00 /ea	1,500	-	-	-	-	-	-	1,593	1,630
	DI Pipe 4in. dia FxPE - 3ft. 0in. Glass Lined	15221.030	1.00 ea	31.00 /mh	62	510.00 /ea	510	-	-	-	-	-	-	572	597
	DI Pipe 4in. dia FxPE - 6ft. 0in. Glass Lined	15221.030	1.00 ea	31.00 /mh	93	1,200.00 /ea	1,200	-	-	-	-	-	-	1,293	1,330
	DI Flanged 90 ell 4" Glass Lined	15221.430	1.00 ea	31.00 /mh	62	600.00 /ea	600	-	-	-	-	-	-	662	687
	DI Flanged Tee 4" Glass Lined	15221.455	3.00 ea	31.00 /mh	186	800.00 /ea	2,400	-	-	-	-	-	-	2,586	2,660
	Sleeve Plastic CS-8-	15121.600	1.00 ea	31.00 /mh	62	150.00 /ea	150	-	-	-	-	-	-	212	237
	Valve Plug Flange 125# 4in	15110.650	3.00 ea	31.00 /mh	186	1,200.00 /ea	3,600	-	-	-	-	-	-	3,786	3,860
	PS Pipe Stand for 4in DIP 3ft 0in floor to CL HDG	15060.406	2.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	PS Knee Brace for 4in DIP 18in horizontal length HDG	15060.278	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	NBG Kit 125# Steel 4in	15125.010	15.00 ea	31.00 /mh	233	25.00 /ea	375	-	-	-	-	-	-	608	701
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	3.00 ea	31.00 /mh	140	92.00 /ea	276	-	-	-	-	-	-	416	471
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	62	75.00 /ea	150	-	-	-	-	-	-	212	237
	PS Epoxy Anchor 5/8 x 7in SS	15060.112	16.00 ea	31.00 /mh	50	16.00 /ea	256	-	-	-	-	-	-	306	325
	PS Pipe Stand grout	15060.404	2.00 ea	31.00 /mh	62	8.00 /ea	16	-	-	-	-	-	-	78	103
	DI MEGALUG for DIP 4"	2511.610	1.00 ea	31.00 /mh	31	25.00 /ea	25	-	-	-	-	-	-	56	68
	Grout Sleeve 8in	15124.300	1.00 ea	31.00 /mh	62	15.00 /ea	15	-	-	-	-	-	-	77	102
	Stainless Steel Nipple 1" x 3"	15212.010	2.00 ea	31.00 /mh	16	8.00 /ea	16	-	-	-	-	-	-	32	38
	Valve Ball Threaded SS 1in	15110.014	1.00 ea	31.00 /mh	27	179.00 /ea	179	-	-	-	-	-	-	206	217
	Instrument - Pressure - Gauge	17400.000	1.00 ea	31.00 /mh	93	1,200.00 /ea	1,200	-	-	-	-	-	-	1,293	1,330

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
150-01 1c 12042002 4" Scum Suction															
	Instrument - Pressure - Transmitter	17400.000	1.00 ea	31.00 /mh	62	0.01 /ea	0	-	-	-	-	-	-	62	87
4" Scum Suction					2,138		14,098							16,236	17,091
150-01 1c 12042002 8"/10" RAS Discharge															
	DI Pipe 6in. dia FxF - 3ft. 1in. w/ 1" tap	15221.010	3.00 ea	31.00 /mh	186	900.00 /ea	2,700	-	-	-	-	-	-	2,886	2,960
	DI Pipe 6in. dia FxF - 6ft. 0in.	15221.010	4.00 ea	31.00 /mh	372	850.00 /ea	3,400	-	-	-	-	-	-	3,772	3,921
	DI Pipe 8in. dia FxF - 4ft. 0in.	15221.010	3.00 ea	31.00 /mh	186	1,100.00 /ea	3,300	-	-	-	-	-	-	3,486	3,560
	DI Pipe 8in. dia FxF - 18ft. 0in.	15221.010	2.00 ea	31.00 /mh	310	2,300.00 /ea	4,600	-	-	-	-	-	-	4,910	5,034
	DI Pipe 10in. dia FxPE - 8ft. 0in.	15221.030	2.00 ea	31.00 /mh	248	1,400.00 /ea	2,800	-	-	-	-	-	-	3,048	3,147
	DI Flanged 90 ell 6"	15221.430	3.00 ea	31.00 /mh	186	300.00 /ea	900	-	-	-	-	-	-	1,086	1,160
	DI Flanged 90 ell 8"	15221.430	3.00 ea	31.00 /mh	186	550.00 /ea	1,650	-	-	-	-	-	-	1,836	1,910
	DI Flanged Tee 8"	15221.455	2.00 ea	31.00 /mh	124	1,100.00 /ea	2,200	-	-	-	-	-	-	2,324	2,374
	DI Flanged Tee 10"	15221.455	1.00 ea	31.00 /mh	62	1,600.00 /ea	1,600	-	-	-	-	-	-	1,662	1,687
	DI Flanged Tee 10x8"	15221.455	1.00 ea	31.00 /mh	62	1,400.00 /ea	1,400	-	-	-	-	-	-	1,462	1,487
	DI Flanged Con Red 8x6"	15221.445	3.00 ea	31.00 /mh	186	350.00 /ea	1,050	-	-	-	-	-	-	1,236	1,310
	DI Flanged Con Red 10x8"	15221.445	1.00 ea	31.00 /mh	62	700.00 /ea	700	-	-	-	-	-	-	762	787
	Link Seal Size LS-340-S	15123.100	48.00 ea	31.00 /mh	223	15.00 /ea	720	-	-	-	-	-	-	943	1,032
	Sleeve Steel WS-14-37-S-	15121.800	1.00 ea	31.00 /mh	62	1,450.00 /ea	1,450	-	-	-	-	-	-	1,512	1,537
	Valve Check Flange 125# 8in	15110.040	3.00 ea	31.00 /mh	279	3,200.00 /ea	9,600	-	-	-	-	-	-	9,879	9,991
	Valve Plug Flange 125# 8in	15110.650	3.00 ea	31.00 /mh	279	1,690.00 /ea	5,070	-	-	-	-	-	-	5,349	5,461
	PS Clevis Hanger HDG 8in	15060.098	6.00 ea	31.00 /mh	186	25.00 /ea	150	-	-	-	-	-	-	336	410
	PS Clevis Hanger HDG 10in	15060.098	2.00 ea	31.00 /mh	62	46.00 /ea	92	-	-	-	-	-	-	154	179
	NBG Kit 125# Steel 6in	15125.010	18.00 ea	31.00 /mh	279	40.00 /ea	720	-	-	-	-	-	-	999	1,111
	NBG Kit 125# Steel 8in	15125.010	29.00 ea	31.00 /mh	450	50.00 /ea	1,450	-	-	-	-	-	-	1,900	2,079
	NBG Kit 125# Steel 10in	15125.010	7.00 ea	31.00 /mh	217	90.00 /ea	630	-	-	-	-	-	-	847	934
	DI MEGAFLANGE w/ Galv Bolts for DIP 8"	15112.220	3.00 ea	31.00 /mh	279	215.00 /ea	645	-	-	-	-	-	-	924	1,036
	DI MEGAFLANGE w/ Galv Bolts for DIP 10"	15112.220	1.00 ea	31.00 /mh	93	300.00 /ea	300	-	-	-	-	-	-	393	430
	DI Blind Flange 8"	15221.405	2.00 ea	31.00 /mh	93	200.00 /ea	400	-	-	-	-	-	-	493	530
	Instrument - Flow - Magnetic Flow Meter - 6in	17200.000	3.00 ea	31.00 /mh	372	0.01 /ea	0	-	-	-	-	-	-	372	521
	Water Tap Saddle 10 x 3/4"	2519.424	2.00 ea	31.00 /mh	62	106.00 /ea	212	-	-	-	-	-	-	274	299
	Water Tap Saddle 6 x 1"	2519.424	3.00 ea	31.00 /mh	93	80.00 /ea	240	-	-	-	-	-	-	333	370
	DI MEGALUG for DIP 10"	2511.610	1.00 ea	31.00 /mh	31	66.00 /ea	66	-	-	-	-	-	-	97	109
	Stainless Steel Nipple 1" x 3"	15212.010	12.00 ea	31.00 /mh	93	8.00 /ea	96	-	-	-	-	-	-	189	226
	Valve Ball Threaded SS 1in	15110.014	8.00 ea	31.00 /mh	216	179.00 /ea	1,432	-	-	-	-	-	-	1,648	1,734
	Stainless Steel 90 Elbow 1"	15212.040	3.00 ea	31.00 /mh	19	200.00 /ea	600	-	-	-	-	-	-	619	626
	Stainless Steel Nipple 1/2" X 2"	15212.010	4.00 ea	31.00 /mh	31	5.00 /ea	20	-	-	-	-	-	-	51	63
	Valve Ball Threaded SS 1/2in	15110.014	2.00 ea	31.00 /mh	33	80.00 /ea	160	-	-	-	-	-	-	193	207
	Grout Sleeve 18in	15124.300	1.00 ea	31.00 /mh	62	35.00 /ea	35	-	-	-	-	-	-	97	122
	PS Ceiling Plate For 3/4" Rod HDG	15060.093	10.00 ea	31.00 /mh	273	60.00 /ea	600	-	-	-	-	-	-	873	982
	PS Epoxy Anchor 3/4 x 7in SS	15060.112	32.00 ea	31.00 /mh	99	21.00 /ea	672	-	-	-	-	-	-	771	811
	PS Threaded Rod 3/4in EG	15060.502	40.00 lf	31.00 /mh	124	8.00 /lf	320	-	-	-	-	-	-	444	494
	Instrument - Pressure - Gauge	17400.000	3.00 ea	31.00 /mh	279	1,200.00 /ea	3,600	-	-	-	-	-	-	3,879	3,991
	Instrument - Pressure - Switch High	17400.000	3.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	Water Tap Saddle 8 x 2"	2519.424	1.00 ea	31.00 /mh	31	106.00 /ea	106	-	-	-	-	-	-	137	149
	Valve Air Release 2in	15110.005	1.00 ea	31.00 /mh	44	4,600.00 /ea	4,600	-	-	-	-	-	-	4,644	4,661
	Stainless Steel Nipple 2" X 3"	15212.010	2.00 ea	31.00 /mh	20	15.00 /ea	30	-	-	-	-	-	-	50	59
	Valve Ball Threaded SS 2in	15110.014	1.00 ea	31.00 /mh	44	465.00 /ea	465	-	-	-	-	-	-	509	526
8"/10" RAS Discharge					6,783		60,781							67,564	70,278
150-01 1c 12042002 4" WAS Discharge															
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	3.00 ea	31.00 /mh	186	510.00 /ea	1,530	-	-	-	-	-	-	1,716	1,790
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	6.00 ea	31.00 /mh	372	560.00 /ea	3,360	-	-	-	-	-	-	3,732	3,881
	DI Pipe 4in. dia FxF - 6ft. 0in.	15221.010	1.00 ea	31.00 /mh	62	850.00 /ea	850	-	-	-	-	-	-	912	937
	DI Pipe 4in. dia FxF - 8ft. 0in.	15221.010	2.00 ea	31.00 /mh	186	780.00 /ea	1,560	-	-	-	-	-	-	1,746	1,820
	DI Pipe 4in. dia FxPE - 6ft. 0in.	15221.030	4.00 ea	31.00 /mh	248	600.00 /ea	2,400	-	-	-	-	-	-	2,648	2,747
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	750.00 /ea	750	-	-	-	-	-	-	874	924
	DI Pipe 4in. dia FxPE - 18ft. 0in.	15221.030	1.00 ea	31.00 /mh	155	1,200.00 /ea	1,200	-	-	-	-	-	-	1,355	1,417
	DI Flanged 90 ell 4"	15221.430	6.00 ea	31.00 /mh	186	200.00 /ea	1,200	-	-	-	-	-	-	1,386	1,460
	DI Flanged 45 ell 4"	15221.425	3.00 ea	31.00 /mh	93	200.00 /ea	600	-	-	-	-	-	-	693	730
	DI Flanged Tee 4"	15221.455	4.00 ea	31.00 /mh	248	300.00 /ea	1,200	-	-	-	-	-	-	1,448	1,547
	Link Seal Size LS-475-S	15123.100	16.00 ea	31.00 /mh	74	16.00 /ea	256	-	-	-	-	-	-	330	360
	Sleeve Plastic CS-8-	15121.600	1.00 ea	31.00 /mh	62	150.00 /ea	150	-	-	-	-	-	-	212	237
	Valve Check Flange 125# 4in	15110.040	3.00 ea	31.00 /mh	186	1,580.00 /ea	4,740	-	-	-	-	-	-	4,926	5,000
	Valve Plug Flange 125# 4in	15110.650	4.00 ea	31.00 /mh	248	1,200.00 /ea	4,800	-	-	-	-	-	-	5,048	5,147
	PS Clevis Hanger HDG 4in	15060.098	3.00 ea	31.00 /mh	47	10.00 /ea	30	-	-	-	-	-	-	77	95
	PS Knee Brace for 4in DIP 24in horizontal length HDG	15060.278	5.00 ea	31.00 /mh	465	0.01 /ea	0	-	-	-	-	-	-	465	651
	NBG Kit 125# Steel 4in	15125.010	37.00 ea	31.00 /mh	344	25.00 /ea	925	-	-	-	-	-	-	1,269	1,407
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	8.00 ea	31.00 /mh	372	92.00 /ea	736	-	-	-	-	-	-	1,108	1,257
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	62	75.00 /ea	150	-	-	-	-	-	-	212	237
	PS Epoxy Anchor 3/4 x 7in SS	15060.112	26.00 ea	31.00 /mh	81	21.00 /ea	546	-	-	-	-	-	-	627	659
	Grout Sleeve 8in	15124.300	4.00 ea	31.00 /mh	248	15.00 /ea	60	-	-	-	-	-	-	308	407
	Instrument - Flow - Magnetic Flow Meter - 4in	17200.000	1.00 ea	31.00 /mh	90	0.01 /ea	0	-	-	-	-	-	-	90	126
	Water Tap Saddle 4 X 1"	2519.424	7.00 ea	31.00 /mh	217	70.00 /ea	490	-	-	-	-	-	-	707	794
	Stainless Steel Nipple 1" x 3"	15212.010	14.00 ea	31.00 /mh	109	8.00 /ea	112	-	-	-	-	-	-	221	264

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 4" WAS Discharge														
	Stainless Steel 90 Elbow 1"	15212.040	3.00 ea	31.00 /mh	19	200.00 /ea	600	-	-	-	-	-	-	619	626
	Valve Ball Threaded SS 1in	15110.014	8.00 ea	31.00 /mh	216	179.00 /ea	1,432	-	-	-	-	-	-	1,648	1,734
	Instrument - Analyzer - TSS	17100.000	4.00 ea	31.00 /mh	248	500.00 /ea	2,000	-	-	-	-	-	-	2,248	2,347
	Instrument - Pressure - Switch Differential	17400.000	3.00 ea	31.00 /mh	279	0.01 /ea	0	-	-	-	-	-	-	279	391
	Instrument - Pressure - Transmitter	17400.000	3.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	DI MEGALUG for DIP 4"	2511.610	1.00 ea	31.00 /mh	5	25.00 /ea	25	-	-	-	-	-	-	30	32
	4" WAS Discharge				5,416		31,702							37,118	39,285
	150-01 1c 12042002 4" DS to Presses														
	DI Pipe 4in. dia FxF - 2ft. 0in. [Lining is all CML or as noted]	15221.010	2.00 ea	31.00 /mh	124	455.00 /ea	910	-	-	-	-	-	-	1,034	1,084
	DI Pipe 4in. dia FxF - 2ft. 6in.	15221.010	2.00 ea	31.00 /mh	124	480.00 /ea	960	-	-	-	-	-	-	1,084	1,134
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	5.00 ea	31.00 /mh	310	510.00 /ea	2,550	-	-	-	-	-	-	2,860	2,984
	DI Pipe 4in. dia FxF - 5ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	610.00 /ea	1,220	-	-	-	-	-	-	1,344	1,394
	DI Pipe 4in. dia FxPE - 4ft. 0in.	15221.030	2.00 ea	31.00 /mh	124	380.00 /ea	760	-	-	-	-	-	-	884	934
	DI Flanged 90 ell 4"	15221.430	3.00 ea	31.00 /mh	93	200.00 /ea	600	-	-	-	-	-	-	693	730
	DI Flanged 90 ell 6"	15221.430	2.00 ea	31.00 /mh	62	300.00 /ea	600	-	-	-	-	-	-	662	687
	DI Flanged Tee 4"	15221.455	3.00 ea	31.00 /mh	140	300.00 /ea	900	-	-	-	-	-	-	1,040	1,095
	DI Flanged Con Red 6x4"	15221.445	2.00 ea	31.00 /mh	124	300.00 /ea	600	-	-	-	-	-	-	724	774
	Valve Plug Flange 125# 4in	15110.650	4.00 ea	31.00 /mh	248	1,200.00 /ea	4,800	-	-	-	-	-	-	5,048	5,147
	PS Pipe Stand for 4in DIP 3ft 0in floor to CL HDG	15060.406	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	PS Pipe Stand for 4in DIP 5ft 0in floor to CL HDG	15060.406	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	NBG Kit 125# Steel 4in	15125.010	35.00 ea	31.00 /mh	543	25.00 /ea	875	-	-	-	-	-	-	1,418	1,635
	NBG Kit 125# Steel 6in	15125.010	8.00 ea	31.00 /mh	124	40.00 /ea	320	-	-	-	-	-	-	444	494
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	5.00 ea	31.00 /mh	233	92.00 /ea	460	-	-	-	-	-	-	693	786
	DI Blind Flange 4"	15221.405	2.00 ea	31.00 /mh	62	75.00 /ea	150	-	-	-	-	-	-	212	237
	PS Expansion Anchor 5/8 x 7in SS	15060.127	16.00 ea	31.00 /mh	50	14.00 /ea	224	-	-	-	-	-	-	274	293
	PS Pipe Stand grout	15060.404	4.00 ea	31.00 /mh	62	8.00 /ea	32	-	-	-	-	-	-	94	119
	Water Tap Saddle 4 X 1"	2519.424	5.00 ea	31.00 /mh	78	70.00 /ea	350	-	-	-	-	-	-	428	459
	Instrument - Flow - Magnetic Flow Meter - 4in	17200.000	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	Valve Special 4in - "FCV"	15110.003	2.00 ea	31.00 /mh	124	10,000.00 /ea	20,000	-	-	-	-	-	-	20,124	20,174
	In-line Polymer Mixer (Motorized)	11900.084	2.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	NBG Kit 125# Insulating 6in	15125.016	2.00 ea	31.00 /mh	62	60.00 /ea	120	-	-	-	-	-	-	182	207
	Stainless Steel Nipple 1" x 3"	15212.010	10.00 ea	31.00 /mh	78	8.00 /ea	80	-	-	-	-	-	-	158	189
	Stainless Steel 90 Elbow 1"	15212.040	6.00 ea	31.00 /mh	37	200.00 /ea	1,200	-	-	-	-	-	-	1,237	1,252
	Valve Ball Threaded SS 1in	15110.014	7.00 ea	31.00 /mh	189	179.00 /ea	1,253	-	-	-	-	-	-	1,442	1,517
	Instrument - Pressure - Transmitter	17400.000	2.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Instrument - Pressure - Gauge	17400.000	2.00 ea	31.00 /mh	124	1,200.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	4" DS to Presses				4,600		41,364							45,964	47,804
	150-01 1c 12042002 12" ALP Blower Discharge														
	PS Clevis Hanger SS 4in	15060.096	2.00 ea	31.00 /mh	62	47.00 /ea	94	-	-	-	-	-	-	156	181
	PS Clevis Hanger SS 12in	15060.096	8.00 ea	31.00 /mh	496	214.00 /ea	1,712	-	-	-	-	-	-	2,208	2,406
	NBG Kit 125# SS 4in	15125.012	5.00 ea	31.00 /mh	78	200.00 /ea	1,000	-	-	-	-	-	-	1,078	1,108
	NBG Kit 125# SS 12in	15125.012	16.00 ea	31.00 /mh	496	500.00 /ea	8,000	-	-	-	-	-	-	8,496	8,694
	NBG Kit 125# SS 20in	15125.012	1.00 ea	31.00 /mh	93	1,200.00 /ea	1,200	-	-	-	-	-	-	1,293	1,330
	Fab Stainless Steel Pipe - 12" - *	15233.505	17.00 ea	31.00 /mh	1,581	/ea		-	-	-	-	-	-	1,581	2,213
	Fab Stainless Steel Pipe - 20" - *	15233.505	1.00 ea	31.00 /mh	186	/ea		-	-	-	-	-	-	186	260
	Fab Stainless Steel Pipe - 4" - *	15233.505	4.00 ea	31.00 /mh	248	/ea		-	-	-	-	-	-	248	347
	Double Disc Valve Check Swing Flange 12"	15110.058	3.00 ea	31.00 /mh	372	4,900.00 /ea	14,700	-	-	-	-	-	-	15,072	15,221
	Valve Butterfly Lugged 125# 12in	15110.026	3.00 ea	31.00 /mh	93	2,240.00 /ea	6,720	-	-	-	-	-	-	6,813	6,850
	FCV Valve Butterfly Lugged 125# 4in w/ Elec Actuator	15110.026	1.00 ea	31.00 /mh	93	6,300.00 /ea	6,300	-	-	-	-	-	-	6,393	6,430
	Expansion Joint Flanged SS 12"	15112.070	5.00 ea	31.00 /mh	930	4,900.00 /ea	24,500	-	-	-	-	-	-	25,430	25,802
	NBG Kit 125# Insulating 20in	15125.016	1.00 ea	31.00 /mh	93	300.00 /ea	300	-	-	-	-	-	-	393	430
	PS Ceiling Plate For 3/4" Rod SS	15060.093	5.00 ea	31.00 /mh	136	60.00 /ea	300	-	-	-	-	-	-	436	491
	PS Misc Hardware for Clevis Hanger Assemblies	15060.290	1.00 ea	31.00 /mh	8	5.00 /ea	5	-	-	-	-	-	-	13	16
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	31.00 /mh	186	15.00 /lf	300	-	-	-	-	-	-	486	560
	PS Threaded Rod 3/4in SS	15060.502	20.00 lf	31.00 /mh	62	8.00 /lf	160	-	-	-	-	-	-	222	247
	Backer Rod and Caulk Sleeve 18in	15124.100	7.00 ea	31.00 /mh	868	100.00 /ea	700	-	-	-	-	-	-	1,568	1,915
	Expansion Material Around Pipe	15124.100	7.00 ea	31.00 /mh	109	40.00 /ea	280	-	-	-	-	-	-	389	432
	Blower Silencer 4"	11100.050	1.00 ea	31.00 /mh		/ea		-	-	-	-	-	-		
	Stainless Steel Nipple 1" x 3"	15212.010	4.00 ea	31.00 /mh	31	8.00 /ea	32	-	-	-	-	-	-	63	75
	Valve Ball Threaded SS 1in	15110.014	2.00 ea	31.00 /mh	54	179.00 /ea	358	-	-	-	-	-	-	412	434
	Instrument - Pressure - Transmitter	17400.000	2.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Core Drilled Hole - 8 -*	15122.100	1.00 ea	31.00 /mh	31	200.00 /ea	200	150.00 /ea	150	-	-	-	-	381	393
	Link Seal Size LS-475-S	15123.100	16.00 ea	31.00 /mh	74	16.00 /ea	256	-	-	-	-	-	-	330	360
	12" ALP Blower Discharge				6,503		67,117		150					73,771	76,372
	150-55 80 4" SPP														
	PVC Sch 80 PIPE 4" PE	15211.203	30.00 lf	31.00 /mh	298	11.00 /lf	330	-	-	-	-	-	-	628	747
	PVC Sch 80 90 EL 4" S	15211.207	4.00 ea	31.00 /mh	40	14.30 /ea	57	-	-	-	-	-	-	97	113
	PVC Sch 80 Straight CPLG 4" S	15211.204	2.00 ea	31.00 /mh	20	12.00 /ea	24	-	-	-	-	-	-	44	52
	PVC Sch 80 Flange Van Stone 4" Soc	15211.223	4.00 ea	31.00 /mh	40	50.00 /ea	200	-	-	-	-	-	-	240	256
	PVC Sch 80 Cement	15211.201	2.00 qt	31.00 /mh		45.00 /qt	99	-	-	-	-	-	-	99	99
	PVC Sch 80 Primer	15211.201	2.00 qt	31.00 /mh		35.00 /qt	77	-	-	-	-	-	-	77	77

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
150-55 80 4" SPP															
	NBG Kit 125# SS 4in	15125.012	4.00 ea	31.00 /mh	62	200.00 /ea	800	-	-	-	-	-	-	862	887
	PS 2 Piece Clamp EG 4in	15060.514	14.00 ea	31.00 /mh	130	14.00 /ea	196	-	-	-	-	-	-	326	378
	PVC Sch 80 PIPE 6" PE	15211.203	10.00 lf	31.00 /mh	99	20.00 /lf	200	-	-	-	-	-	-	299	339
	PVC Sch 80 90 EL 6" S	15211.207	2.00 ea	31.00 /mh	20	40.80 /ea	82	-	-	-	-	-	-	101	109
	PVC Sch 80 Flange Van Stone 6" Soc	15211.223	2.00 ea	31.00 /mh	20	80.00 /ea	160	-	-	-	-	-	-	180	188
	PVC Sch 80 Concentric Reducer Coupling 6X4 S	15211.205	2.00 ea	31.00 /mh	20	60.00 /ea	120	-	-	-	-	-	-	140	148
	NBG Kit 125# SS 6in	15125.012	2.00 ea	31.00 /mh	31	250.00 /ea	500	-	-	-	-	-	-	531	543
	Stainless Steel Nipple 1" x 3"	15212.010	4.00 ea	31.00 /mh	31	8.00 /ea	32	-	-	-	-	-	-	63	75
	Stainless Steel 90 Elbow 1"	15212.040	2.00 ea	31.00 /mh	12	200.00 /ea	400	-	-	-	-	-	-	412	417
	Valve Ball Threaded SS 1in	15110.014	2.00 ea	31.00 /mh	62	179.00 /ea	358	-	-	-	-	-	-	420	445
4" SPP			30.00 lf		884		3,635	/lf						4,519	4,873
150-55 80 Chemical Piping (SHC, Poly, Gly, FC)															
	PVC Sch 80 PIPE 2" PE	15211.203	220.00 lf	31.00 /mh	2,046	4.00 /lf	880	-	-	-	-	-	-	2,926	3,744
	PVC Sch 80 PIPE 1/2" PE	15211.203	20.00 lf	31.00 /mh	186	1.00 /lf	20	-	-	-	-	-	-	206	280
	PVC Sch 80 PIPE 3" PE	15211.203	80.00 lf	31.00 /mh	744	8.00 /lf	640	-	-	-	-	-	-	1,384	1,682
	PVC Sch 80 90 EL 2" S	15211.207	40.00 ea	31.00 /mh	372	3.60 /ea	144	-	-	-	-	-	-	516	665
	PVC Sch 80 90 EL 3" S	15211.207	20.00 ea	31.00 /mh	186	9.50 /ea	190	-	-	-	-	-	-	376	450
	PVC Sch 80 90 EL 1/2" S	15211.207	6.00 ea	31.00 /mh	56	1.00 /ea	6	-	-	-	-	-	-	62	84
	PVC Sch 80 45 EL 2" SOCxSOC	15211.208	20.00 ea	31.00 /mh	186	7.00 /ea	140	-	-	-	-	-	-	326	400
	PVC Sch 80 45 EL 3" SOCxSOC	15211.208	10.00 ea	31.00 /mh	93	20.00 /ea	200	-	-	-	-	-	-	293	330
	PVC Sch 80 45 EL 1/2" SOCxSOC	15211.208	6.00 ea	31.00 /mh	56	1.90 /ea	11	-	-	-	-	-	-	67	90
	PVC Sch 80 TEE 2" S	15211.211	12.00 ea	31.00 /mh	112	12.80 /ea	154	-	-	-	-	-	-	265	310
	PVC Sch 80 TEE 3" S	15211.211	6.00 ea	31.00 /mh	56	17.40 /ea	104	-	-	-	-	-	-	160	183
	PVC Sch 80 TEE 1/2" S	15211.211	4.00 ea	31.00 /mh	37	2.90 /ea	12	-	-	-	-	-	-	49	64
	PVC Sch 80 Straight CPLG 2" S	15211.204	10.00 ea	31.00 /mh	93	4.00 /ea	40	-	-	-	-	-	-	133	170
	PVC Sch 80 Straight CPLG 3" S	15211.204	5.00 ea	31.00 /mh	47	10.00 /ea	50	-	-	-	-	-	-	97	115
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	16.00 ea	31.00 /mh	149	9.90 /ea	158	-	-	-	-	-	-	307	367
	PVC Sch 80 MALE ADPT 3" SXMT	15211.217	8.00 ea	31.00 /mh	74	12.40 /ea	99	-	-	-	-	-	-	174	203
	PVC Sch 80 Straight CPLG 1/2" S	15211.204	1.00 ea	31.00 /mh	9	2.00 /ea	2	-	-	-	-	-	-	11	15
	PVC Sch 80 MALE ADPT 1/2" SXMT	15211.217	6.00 ea	31.00 /mh	56	2.20 /ea	13	-	-	-	-	-	-	69	91
	PVC Sch 80 Cement	15211.201	4.00 qt	31.00 /mh		45.00 /qt	198	-	-	-	-	-	-	198	198
	PVC Sch 80 Primer	15211.201	4.00 qt	31.00 /mh		35.00 /qt	154	-	-	-	-	-	-	154	154
	PVC Sch 80 FEM ADPT 1/2" SXT	15211.218	2.00 ea	31.00 /mh	19	1.70 /ea	3	-	-	-	-	-	-	22	29
	PVC Valve Ball True Union Viton 2" S & T	15211.310	46.00 ea	31.00 /mh	2,852	90.00 /ea	4,140	-	-	-	-	-	-	6,992	8,133
	PVC Valve Ball True Union Viton 3" S	15211.310	10.00 ea	31.00 /mh	620	220.00 /ea	2,200	-	-	-	-	-	-	2,820	3,068
	PS Strut SS 1-5/8 x 1-5/8	15060.476	120.00 lf	31.00 /mh	1,116	15.00 /lf	1,800	-	-	-	-	-	-	2,916	3,362
	PS 2 Piece Clamp SS 2in	15060.518	72.00 ea	31.00 /mh	670	7.00 /ea	504	-	-	-	-	-	-	1,174	1,441
	PS 2 Piece Clamp SS 3in	15060.518	28.00 ea	31.00 /mh	260	7.00 /ea	196	-	-	-	-	-	-	456	561
	PS Expansion Anchor 3/8 x 5in SS	15060.127	185.00 ea	31.00 /mh	574	5.00 /ea	925	-	-	-	-	-	-	1,499	1,728
	PS Clevis Hanger SS 2in	15060.096	16.00 ea	31.00 /mh	149	19.00 /ea	304	-	-	-	-	-	-	453	512
	PS Clevis Hanger SS 3in	15060.096	7.00 ea	31.00 /mh	65	29.00 /ea	203	-	-	-	-	-	-	268	294
	PS 2 Piece Clamp SS 1/2 in	15060.518	10.00 ea	31.00 /mh	93	4.00 /ea	40	-	-	-	-	-	-	133	170
	PS Threaded Rod 3/8in SS	15060.502	80.00 lf	31.00 /mh	248	2.00 /lf	160	-	-	-	-	-	-	408	507
	PS Threaded Rod 1/2in SS	15060.502	35.00 lf	31.00 /mh	109	3.00 /lf	105	-	-	-	-	-	-	214	257
	PS Hex Nut SS 3/8	15060.354	48.00 ea	31.00 /mh	74	0.50 /ea	24	-	-	-	-	-	-	98	128
	PS Hex Nut SS 1/2	15060.354	21.00 ea	31.00 /mh	49	0.50 /ea	11	-	-	-	-	-	-	59	79
	PS Clevis Hanger EG 1/2in	15060.094	3.00 ea	31.00 /mh	28	2.00 /ea	6	-	-	-	-	-	-	34	45
	PS Washer Flat 3/8 SS	15060.576	48.00 ea	31.00 /mh	37	3.00 /ea	144	-	-	-	-	-	-	181	196
	PS Washer Flat 1/2 SS	15060.576	21.00 ea	31.00 /mh	163	4.00 /ea	84	-	-	-	-	-	-	247	312
	PS Beam/C Clamp W/lk Nut 1/2	15060.082	7.00 ea	31.00 /mh	22	30.00 /ea	210	-	-	-	-	-	-	232	240
	PS Threaded Rod 3/8in EG	15060.502	15.00 lf	31.00 /mh	47	2.00 /lf	30	-	-	-	-	-	-	77	95
	PS Beam/C Clamp W/lk Nut 3/8	15060.082	19.00 ea	31.00 /mh	59	15.00 /ea	285	-	-	-	-	-	-	344	367
	PS Hex Nut EG 3/8	15060.354	9.00 ea	31.00 /mh	14	0.50 /ea	5	-	-	-	-	-	-	18	24
	PVC Reinf Tubing 1/2" ID x 3/4" OD	15219.100	100.00 lf	31.00 /mh	155	2.00 /lf	230	-	-	-	-	-	-	385	447
	Tubing Clamp SS Worm Drive 1/2"	15219.110	10.00 ea	31.00 /mh	25	3.00 /ea	30	-	-	-	-	-	-	55	65
	HDPE Fittings	15211.484	1.00 ls	31.00 /mh	7	5.00 /ls	5	-	-	-	-	-	-	12	14
	PS Washer Flat 3/8 EG	15060.576	9.00 ea	31.00 /mh	70	3.00 /ea	27	-	-	-	-	-	-	97	125
	PVC Valve Ball True Union Viton 1/2" S & T	15211.310	8.00 ea	31.00 /mh	124	35.00 /ea	280	-	-	-	-	-	-	404	454
	PVC Valve Ball Check True Union Viton 1/2" S & T	15211.330	2.00 ea	31.00 /mh	31	50.00 /ea	100	-	-	-	-	-	-	131	143
	PVC Valve Ball True Union Viton 1/2" S & T	15211.310	2.00 ea	31.00 /mh	31	35.00 /ea	70	-	-	-	-	-	-	101	113
	Valve PRV Flange Bronze 150# 1/2"	15110.715	2.00 ea	31.00 /mh	62	950.00 /ea	1,900	-	-	-	-	-	-	1,962	1,987
	Core Drilled Hole - 5 -*	15122.100	10.00 ea	31.00 /mh	310	200.00 /ea	2,000	150.00 /ea	1,500	-	-	-	-	3,810	3,934
	Grout Sleeve 6in	15124.300	10.00 ea	31.00 /mh	620	10.00 /ea	100	-	-	-	-	-	-	720	968
	Camlock Adapter SS Male x MPT 2"	15220.600	6.00 ea	31.00 /mh	186	100.00 /ea	600	-	-	-	-	-	-	786	860
Chemical Piping (SHC, Poly, Gly, FC)			260.00 lf		13,443		19,936	5.77 /lf	1,500					34,879	40,256
150-55 80 NPW															
	PVC Sch 80 PIPE 1/2" PE	15211.203	100.00 lf	31.00 /mh	651	1.00 /lf	100	-	-	-	-	-	-	751	1,011
	PVC Sch 80 PIPE 1" PE	15211.203	300.00 lf	31.00 /mh	1,953	2.00 /lf	600	-	-	-	-	-	-	2,553	3,334
	PVC Sch 80 PIPE 3" PE	15211.203	150.00 lf	31.00 /mh	1,488	8.00 /lf	1,200	-	-	-	-	-	-	2,688	3,283
	PVC Sch 80 PIPE 1.5" PE	15211.203	100.00 lf	31.00 /mh	651	3.00 /lf	300	-	-	-	-	-	-	951	1,211
	PVC Sch 80 90 EL 1/2" S	15211.207	16.00 ea	31.00 /mh	104	1.00 /ea	16	-	-	-	-	-	-	120	162
	PVC Sch 80 90 EL 1" S	15211.207	30.00 ea	31.00 /mh	195	2.10 /ea	63	-	-	-	-	-	-	258	336

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-55 80 NPW														
	PVC Sch 80 90 EL 3" S	15211.207	10.00 ea	31.00 /mh	99	9.50 /ea	95	-	-	-	-	-	-	194	234
	PVC Sch 80 90 EL 1.5" S	15211.207	10.00 ea	31.00 /mh	65	3.00 /ea	30	-	-	-	-	-	-	95	121
	PVC Sch 80 45 EL 1/2" SOCxSOC	15211.208	8.00 ea	31.00 /mh	52	1.90 /ea	15	-	-	-	-	-	-	67	88
	PVC Sch 80 45 EL 1" SOCxSOC	15211.208	36.00 ea	31.00 /mh	234	4.40 /ea	158	-	-	-	-	-	-	393	487
	PVC Sch 80 45 EL 3" SOCxSOC	15211.208	12.00 ea	31.00 /mh	119	20.00 /ea	240	-	-	-	-	-	-	359	407
	PVC Sch 80 45 EL 1.5" SOCxSOC	15211.208	16.00 ea	31.00 /mh	104	6.60 /ea	106	-	-	-	-	-	-	210	251
	PVC Sch 80 TEE 1/2" S	15211.211	6.00 ea	31.00 /mh	39	2.90 /ea	17	-	-	-	-	-	-	56	72
	PVC Sch 80 TEE 1" S	15211.211	10.00 ea	31.00 /mh	65	3.70 /ea	37	-	-	-	-	-	-	102	128
	PVC Sch 80 TEE 3" S	15211.211	6.00 ea	31.00 /mh	60	17.40 /ea	104	-	-	-	-	-	-	164	188
	PVC Sch 80 TEE 1.5" S	15211.211	6.00 ea	31.00 /mh	39	10.20 /ea	61	-	-	-	-	-	-	100	116
	PVC Sch 80 Straight CPLG 1/2" S	15211.204	6.00 ea	31.00 /mh	39	2.00 /ea	12	-	-	-	-	-	-	51	67
	PVC Sch 80 Straight CPLG 1" S	15211.204	20.00 ea	31.00 /mh	130	2.00 /ea	40	-	-	-	-	-	-	170	222
	PVC Sch 80 Straight CPLG 3" S	15211.204	10.00 ea	31.00 /mh	99	10.00 /ea	100	-	-	-	-	-	-	199	239
	PVC Sch 80 MALE ADPT 1/2" SXMT	15211.217	5.00 ea	31.00 /mh	33	2.20 /ea	11	-	-	-	-	-	-	44	57
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	12.00 ea	31.00 /mh	78	4.10 /ea	49	-	-	-	-	-	-	127	159
	PVC Sch 80 MALE ADPT 3" SXMT	15211.217	5.00 ea	31.00 /mh	50	12.40 /ea	62	-	-	-	-	-	-	112	131
	PVC Sch 80 Straight CPLG 1.5" S	15211.204	6.00 ea	31.00 /mh	39	3.00 /ea	18	-	-	-	-	-	-	57	73
	PVC Sch 80 FEM ADPT 1/2" SXT	15211.218	2.00 ea	31.00 /mh	13	1.70 /ea	3	-	-	-	-	-	-	16	22
	PVC Sch 80 FEM ADPT 1" SXT	15211.218	6.00 ea	31.00 /mh	39	3.80 /ea	23	-	-	-	-	-	-	62	77
	PVC Sch 80 MALE ADPT 1.5" SXMT	15211.217	12.00 ea	31.00 /mh	78	6.80 /ea	82	-	-	-	-	-	-	160	191
	PVC Sch 80 Flange Van Stone 1" Soc	15211.223	6.00 ea	31.00 /mh	39	15.00 /ea	90	-	-	-	-	-	-	129	145
	PVC Sch 80 Flange Van Stone 3" Soc	15211.223	6.00 ea	31.00 /mh	60	40.00 /ea	240	-	-	-	-	-	-	300	323
	PVC Sch 80 Cement	15211.201	7.00 qt	31.00 /mh		45.00 /qt	347	-	-	-	-	-	-	347	347
	PVC Sch 80 Primer	15211.201	7.00 qt	31.00 /mh		35.00 /qt	270	-	-	-	-	-	-	270	270
	NBG Kit 125# SS 1in	15125.012	6.00 ea	31.00 /mh	93	77.00 /ea	462	-	-	-	-	-	-	555	592
	NBG Kit 125# SS 3in	15125.012	2.00 ea	31.00 /mh	31	205.00 /ea	410	-	-	-	-	-	-	441	453
	PVC Valve Ball True Union Viton 1/2" S & T	15211.310	12.00 ea	31.00 /mh	78	35.00 /ea	420	-	-	-	-	-	-	498	529
	PVC Valve Ball True Union Viton 1" S & T	15211.310	32.00 ea	31.00 /mh	208	45.00 /ea	1,440	-	-	-	-	-	-	1,648	1,732
	PVC Valve Ball True Union Viton 3" S	15211.310	4.00 ea	31.00 /mh	26	220.00 /ea	880	-	-	-	-	-	-	906	916
	PS Strut SS 1-5/8 x 1-5/8	15060.476	600.00 lf	31.00 /mh	5,580	15.00 /lf	9,000	-	-	-	-	-	-	14,580	16,812
	PS Strut Post Base SS	15060.478	4.00 ea	31.00 /mh	37	80.00 /ea	320	-	-	-	-	-	-	357	372
	PS 2 Piece Clamp SS 1/2 in	15060.518	20.00 ea	31.00 /mh	186	4.00 /ea	80	-	-	-	-	-	-	266	340
	PS 2 Piece Clamp SS 1in	15060.518	40.00 ea	31.00 /mh	372	5.00 /ea	200	-	-	-	-	-	-	572	721
	PS 2 Piece Clamp SS 3in	15060.518	20.00 ea	31.00 /mh	186	7.00 /ea	140	-	-	-	-	-	-	326	400
	PS Expansion Anchor 3/8 x 5in SS	15060.127	100.00 ea	31.00 /mh	155	5.00 /ea	500	-	-	-	-	-	-	655	717
	PS Clevis Hanger SS 1/2in	15060.096	15.00 ea	31.00 /mh	140	10.00 /ea	150	-	-	-	-	-	-	290	345
	PS 2 Piece Clamp EG 1-½in	15060.514	20.00 ea	31.00 /mh	186	7.00 /ea	140	-	-	-	-	-	-	326	400
	PS Clevis Hanger SS 1in	15060.096	43.00 ea	31.00 /mh	400	12.00 /ea	516	-	-	-	-	-	-	916	1,076
	PS Clevis Hanger SS 3in	15060.096	13.00 ea	31.00 /mh	121	29.00 /ea	377	-	-	-	-	-	-	498	546
	PS Threaded Rod 3/8in SS	15060.502	290.00 lf	31.00 /mh	899	2.00 /lf	580	-	-	-	-	-	-	1,479	1,839
	PS Threaded Rod 1/2in SS	15060.502	65.00 lf	31.00 /mh	202	3.00 /lf	195	-	-	-	-	-	-	397	477
	PS Hex Nut SS 3/8	15060.354	174.00 ea	31.00 /mh	270	0.50 /ea	87	-	-	-	-	-	-	357	465
	PS Clevis Hanger EG 1-½in	15060.094	12.00 ea	31.00 /mh	112	18.00 /ea	216	-	-	-	-	-	-	328	372
	PS Hex Nut SS 1/2	15060.354	39.00 ea	31.00 /mh	91	0.50 /ea	20	-	-	-	-	-	-	110	146
	PS Washer Flat 3/8 SS	15060.576	174.00 ea	31.00 /mh	135	3.00 /ea	522	-	-	-	-	-	-	657	711
	PS Washer Flat 1/2 SS	15060.576	39.00 ea	31.00 /mh	302	4.00 /ea	156	-	-	-	-	-	-	458	579
	PS Threaded Rod 3/8in EG	15060.502	60.00 lf	31.00 /mh	186	2.00 /lf	120	-	-	-	-	-	-	306	380
	PS Beam/C Clamp W/lk Nut 1/2	15060.082	13.00 ea	31.00 /mh	40	30.00 /ea	390	-	-	-	-	-	-	430	446
	PS Beam/C Clamp W/lk Nut 3/8	15060.082	70.00 ea	31.00 /mh	217	15.00 /ea	1,050	-	-	-	-	-	-	1,267	1,354
	PS Hex Nut EG 3/8	15060.354	36.00 ea	31.00 /mh	56	0.50 /ea	18	-	-	-	-	-	-	74	96
	Valve Special 1in - Solenoid Valve	15110.003	8.00 ea	31.00 /mh	248	600.00 /ea	4,800	-	-	-	-	-	-	5,048	5,147
	PVC Valve Ball Check True Union Viton 1" S & T	15211.330	4.00 ea	31.00 /mh	26	70.00 /ea	280	-	-	-	-	-	-	306	316
	PS Washer Flat 3/8 EG	15060.576	36.00 ea	31.00 /mh	279	3.00 /ea	108	-	-	-	-	-	-	387	499
	Hose Bib Brass No Press 1-½"	15110.455	12.00 ea	31.00 /mh	744	250.00 /ea	3,000	-	-	-	-	-	-	3,744	4,042
	Strainer Flange Wye 125# 2"	15112.430	2.00 ea	31.00 /mh	102	500.00 /ea	1,000	-	-	-	-	-	-	1,102	1,142
	NPW		650.00 lf		18,322		32,066	/lf						50,388	57,717
	150-553 1" AHP to Presses														
	Stainless Steel Pipe 1"	15212.005	60.00 lf	31.00 /mh	465	20.00 /lf	1,200	-	-	-	-	-	-	1,665	1,851
	Stainless Steel 45 Elbow 1"	15212.035	8.00 ea	31.00 /mh	62	200.00 /ea	1,600	-	-	-	-	-	-	1,662	1,687
	Stainless Steel 90 Elbow 1"	15212.040	10.00 ea	31.00 /mh	78	200.00 /ea	2,000	-	-	-	-	-	-	2,078	2,108
	Stainless Steel Union 1"	15212.060	5.00 ea	31.00 /mh	39	400.00 /ea	2,000	-	-	-	-	-	-	2,039	2,054
	Stainless Steel Nipple 1" x 3"	15212.010	8.00 ea	31.00 /mh	62	8.00 /ea	64	-	-	-	-	-	-	126	151
	Stainless Steel Tee 1"	15212.055	6.00 ea	31.00 /mh	47	350.00 /ea	2,100	-	-	-	-	-	-	2,147	2,165
	Valve Ball Threaded SS 1in	15110.014	10.00 ea	31.00 /mh	270	179.00 /ea	1,790	-	-	-	-	-	-	2,060	2,168
	Valve Special 1in - Solenoid Valve	15110.003	4.00 ea	31.00 /mh	124	600.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	PS 2 Piece Clamp SS 1in	15060.518	20.00 ea	31.00 /mh	186	5.00 /ea	100	-	-	-	-	-	-	286	360
	PS Strut SS 1-5/8 x 1-5/8	15060.476	30.00 lf	31.00 /mh	279	15.00 /lf	450	-	-	-	-	-	-	729	841
	PS Strut Spring Nut SS 3/8"	15060.484	20.00 ea	31.00 /mh	104	9.00 /ea	189	-	-	-	-	-	-	293	334
	PS Expansion Anchor 3/8 x 3-1/2in SS	15060.127	20.00 ea	31.00 /mh	62	4.00 /ea	80	-	-	-	-	-	-	142	167
	Instrument - Pressure - Switch Low	17400.000	2.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Instrument - Pressure - Gauge	17400.000	2.00 ea	31.00 /mh	124	1,200.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	1" AHP to Presses				2,024		16,373							18,397	19,207
	150-553 2" AHP														
	Stainless Steel Pipe 2"	15212.005	80.00 lf	31.00 /mh	992	35.00 /lf	2,800	-	-	-	-	-	-	3,792	4,189
	Stainless Steel Nipple 2" X 3"	15212.010	4.00 ea	31.00 /mh	41	15.00 /ea	60	-	-	-	-	-	-	101	117
	Stainless Steel 45 Elbow 2"	15212.035	10.00 ea	31.00 /mh	310	610.00 /ea	6,100	-	-	-	-	-	-	6,410	6,534
	Stainless Steel 90 Elbow 2"	15212.040	14.00 ea	31.00 /mh	434	610.00 /ea	8,540	-	-	-	-	-	-	8,974	9,148
	Stainless Steel Companion Flange 2	15212.084	2.00 ea	31.00 /mh	12	450.00 /ea	900	-	-	-	-	-	-	912	917
	Stainless Steel Tee 2"	15212.055	4.00 ea	31.00 /mh	25	800.00 /ea	3,200	-	-	-	-	-	-	3,225	3,235
	Stainless Steel Union 2"	15212.060	6.00 ea	31.00 /mh	37	1,100.00 /ea	6,600	-	-	-	-	-	-	6,637	6,652
	Valve Ball Threaded SS 2in	15110.014	8.00 ea	31.00 /mh	496	465.00 /ea	3,720	-	-	-	-	-	-	4,216	4,414
	PS Expansion Anchor 3/8 x 5in SS	15060.127	42.00 ea	31.00 /mh	130	5.00 /ea	210	-	-	-	-	-	-	340	392
	PS Strut SS 1-5/8 x 1-5/8	15060.476	30.00 lf	31.00 /mh	279	15.00 /lf	450	-	-	-	-	-	-	729	841
	PS Strut Misc Bolts and Hardware	15060.476	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	PS 2 Piece Clamp SS 2in	15060.518	30.00 ea	31.00 /mh	279	7.00 /ea	210	-	-	-	-	-	-	489	601
	2" AHP				3,036		32,790							35,826	37,040
	GEN General				118,850		451,695		1,650		3,344		1,208	576,747	624,353
	HDPE HDPE														
	0330 4- 3" GLY PIPE ENCASEMENT														
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	60.12 sf	31.00 /mh	466	1.50 /sf	95	-	-	-	-	-	-	561	747
	Place Pipe Encasement	3310.195	4.00 cy	31.00 /mh	133	166.00 /cy	710	-	-	-	-	-	-	843	896
	Nails and Hardware	3150.200	60.12 sf	31.00 /mh	0	0.04 /sf	2	-	-	-	-	-	-	2	2
	Form Ties Specialty	3150.632	10.00 ea	31.00 /mh	62	5.00 /ea	50	-	-	-	-	-	-	112	137
	Pipe Tie Downs (Small)	3150.200	5.00 ea	31.00 /mh	620	75.00 /ea	375	-	-	-	-	-	-	995	1,243
	Dimension Lumber	3150.200	60.12 sf	31.00 /mh	0	0.50 /sf	30	-	-	-	-	-	-	30	30
	Oil SOG Form	3100.310	60.12 sf	31.00 /mh	0	0.02 /sf	1	-	-	-	-	-	-	1	1
	Finish- Rough	3350.110	45.00 sf	31.00 /mh	13	0.01 /sf	0	-	-	-	-	-	-	13	18
	Liquid Curing Compounds	3390.170	45.00 sf	31.00 /mh	3	0.06 /sf	3	-	-	-	-	-	-	5	7
	Pipe Encasement Rebar	3200.980	0.10 tn	31.00 /mh	93	1,400.00 /tn	140	-	-	-	-	-	-	233	270
	3" GLY PIPE ENCASEMENT		4.00 CY		1,389		1,407	/CY						2,796	3,351
	HDPE HDPE				1,389		1,407							2,796	3,351
	350 Step Feed Process Building				120,239		453,102	/LS	1,650		3,344		1,208	579,542	627,705
	400 Orbal Anaerobic Reactor														
	General														
	150-01 1c 12042002 14" ABI in Orbal														
	DI Pipe 14in. dia FxPE - 6ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	3,500.00 /ea	3,500	-	-	-	-	-	-	3,624	3,674
	DI Pipe 14in. dia FxPE - 8ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	3,500.00 /ea	3,500	-	-	-	-	-	-	3,624	3,674
	DI Flanged 90 ell 14"	15221.430	1.00 ea	31.00 /mh	78	2,500.00 /ea	2,500	-	-	-	-	-	-	2,578	2,609
	NBG Kit 125# SS 14in	15125.012	3.00 ea	31.00 /mh	93	500.00 /ea	1,500	-	-	-	-	-	-	1,593	1,630
	Sleeve w/Ring Steel WS-18- 16"	15121.850	2.00 ea	31.00 /mh	372	1,800.00 /ea	3,600	-	-	-	-	-	-	3,972	4,121
	Link Seal Size LS-360-C	15123.050	96.00 ea	31.00 /mh	446	16.00 /ea	1,536	-	-	-	-	-	-	1,982	2,161
	14" ABI in Orbal				1,237		16,136							17,373	17,868
	General				1,237		16,136							17,373	17,868
	GEN General														
	150-01 1c 12042002 10" MLR in Exist. Orbal														
	DI Pipe 10in. dia FxF - 18ft. 0in.	15221.010	3.00 ea	31.00 /mh	744	2,200.00 /ea	6,600	-	-	-	-	-	-	7,344	7,642
	DI Pipe 10in. dia FxPE - 18ft. 0in.	15221.030	2.00 ea	31.00 /mh	496	3,500.00 /ea	7,000	-	-	-	-	-	-	7,496	7,694
	DI Flanged 90 ell 6"	15221.430	5.00 ea	31.00 /mh	310	300.00 /ea	1,500	-	-	-	-	-	-	1,810	1,934
	Valve Check Flange 125# 6in	15110.040	1.00 ea	31.00 /mh	93	1,870.00 /ea	1,870	-	-	-	-	-	-	1,963	2,000
	Valve Plug Flange 125# 6in	15110.650	1.00 ea	31.00 /mh	93	1,280.00 /ea	1,280	-	-	-	-	-	-	1,373	1,410
	PS Special Support for 6in DIP - SST	15060.475	5.00 ea	31.00 /mh	930	0.01 /ea	0	-	-	-	-	-	-	930	1,302
	NBG Kit 125# SS 6in	15125.012	16.00 ea	31.00 /mh	248	250.00 /ea	4,000	-	-	-	-	-	-	4,248	4,347
	PS Expansion Anchor 3/4 x 7in SS	15060.127	36.00 ea	31.00 /mh	112	17.00 /ea	612	-	-	-	-	-	-	724	768
	DI MEGAFLANGE w/ SS Bolts for DIP 10"	15112.230	2.00 ea	31.00 /mh	186	700.00 /ea	1,400	-	-	-	-	-	-	1,586	1,660
	10" MLR in Exist. Orbal				3,212		24,262							27,474	28,758
	150-553 2" AHP														
	Supply Steel Pipe Package	15233.405	1.00 ls	-	-	360,000.00 /ls	360,000	-	-	-	-	-	-	360,000	360,000
	Stainless Steel Pipe 2"	15212.005	30.00 lf	31.00 /mh	372	35.00 /lf	1,050	-	-	-	-	-	-	1,422	1,571
	Stainless Steel Nipple 2" X 3"	15212.010	2.00 ea	31.00 /mh	20	15.00 /ea	30	-	-	-	-	-	-	50	59
	Stainless Steel 45 Elbow 2"	15212.035	4.00 ea	31.00 /mh	25	610.00 /ea	2,440	-	-	-	-	-	-	2,465	2,475
	Stainless Steel 90 Elbow 2"	15212.040	4.00 ea	31.00 /mh	25	610.00 /ea	2,440	-	-	-	-	-	-	2,465	2,475
	Stainless Steel Tee 2"	15212.055	1.00 ea	31.00 /mh	6	800.00 /ea	800	-	-	-	-	-	-	806	809
	Stainless Steel Union 2"	15212.060	2.00 ea	31.00 /mh	12	1,100.00 /ea	2,200	-	-	-	-	-	-	2,212	2,217
	Valve Ball Threaded SS 2in	15110.014	4.00 ea	31.00 /mh	175	465.00 /ea	1,860	-	-	-	-	-	-	2,035	2,105
	PS Expansion Anchor 3/8 x 5in SS	15060.127	12.00 ea	31.00 /mh	19	5.00 /ea	60	-	-	-	-	-	-	79	86
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	31.00 /mh	186	15.00 /lf	300	-	-	-	-	-	-	486	560
	PS 2 Piece Clamp SS 2in	15060.518	6.00 ea	31.00 /mh	56	7.00 /ea	42	-	-	-	-	-	-	98	120
	2" AHP				896		371,222							372,118	372,476
	GEN General				4,108		395,484							399,592	401,235

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	400 Orbal Anaerobic Reactor				5,344		411,620	/LS						416,964	419,102
550 UV	and Digester Blower Building														
CML	Ductile Iron														
	0330 4- Encase 24" SE Below UV														
	Excavation - Mass	2317.105	686.00 cy	31.00 /mh	1,063	-	-	-	-	-	-	-	-	1,063	1,489
	Backfill - Mass	2319.302	655.00 cy	31.00 /mh	1,015	-	-	-	-	-	-	-	-	1,015	1,421
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	389.36 sf	31.00 /mh	3,018	1.50 /sf	613	-	-	-	-	-	-	3,631	4,838
	Place Pipe Encasement	3310.195	26.00 cy	31.00 /mh	862	166.00 /cy	4,618	-	-	-	-	-	-	5,481	5,826
	Nails and Hardware	3150.200	389.36 sf	31.00 /mh	0	0.04 /sf	16	-	-	-	-	-	-	16	16
	Form Ties Specialty	3150.632	26.00 ea	31.00 /mh	161	5.00 /ea	130	-	-	-	-	-	-	291	356
	Pipe Tie Downs (Medium)	3150.200	9.00 ea	31.00 /mh	1,395	150.00 /ea	1,350	-	-	-	-	-	-	2,745	3,303
	Dimension Lumber	3150.200	389.36 sf	31.00 /mh	0	0.50 /sf	195	-	-	-	-	-	-	195	195
	Oil SOG Form	3100.310	389.36 sf	31.00 /mh	0	0.02 /sf	8	-	-	-	-	-	-	8	8
	Finish- Rough	3350.110	180.01 sf	31.00 /mh	50	0.01 /sf	1	-	-	-	-	-	-	51	71
	Liquid Curing Compounds	3390.170	180.01 sf	31.00 /mh	11	0.06 /sf	11	-	-	-	-	-	-	22	26
	Encasement Rebar	3210.104	1.98 tn	31.00 /mh	1,841	1,400.00 /tn	2,911	-	-	-	-	-	-	4,752	5,489
	Waterstop Adeka or Swellstop	3510.610	106.00 lf	31.00 /mh	329	8.50 /lf	946	-	-	-	-	-	-	1,275	1,406
	Encase 24" SE Below UV		26.00 CY		9,746		10,798	/CY						20,544	24,443
	0330 4- Encase 18" SE Below UV														
	Excavation - Mass	2317.105	100.00 cy	31.00 /mh	155	-	-	-	-	-	-	-	-	155	217
	Backfill - Mass	2319.302	81.00 cy	31.00 /mh	126	-	-	-	-	-	-	-	-	126	176
	Other Placement Count	3310.360	2.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	295.76 sf	31.00 /mh	2,292	1.50 /sf	466	-	-	-	-	-	-	2,758	3,675
	Place Pipe Encasement	3310.195	16.00 cy	31.00 /mh	531	166.00 /cy	2,842	-	-	-	-	-	-	3,373	3,585
	Nails and Hardware	3150.200	295.76 sf	31.00 /mh	0	0.04 /sf	12	-	-	-	-	-	-	12	12
	Form Ties Specialty	3150.632	26.00 ea	31.00 /mh	161	5.00 /ea	130	-	-	-	-	-	-	291	356
	Pipe Tie Downs (Medium)	3150.200	9.00 ea	31.00 /mh	1,395	150.00 /ea	1,350	-	-	-	-	-	-	2,745	3,303
	Dimension Lumber	3150.200	295.76 sf	31.00 /mh	0	0.50 /sf	148	-	-	-	-	-	-	148	148
	Oil SOG Form	3100.310	295.76 sf	31.00 /mh	0	0.02 /sf	6	-	-	-	-	-	-	6	6
	Finish- Rough	3350.110	139.12 sf	31.00 /mh	39	0.01 /sf	1	-	-	-	-	-	-	40	55
	Liquid Curing Compounds	3390.170	139.12 sf	31.00 /mh	9	0.06 /sf	8	-	-	-	-	-	-	17	20
	Encasement Rebar	3210.104	0.52 tn	31.00 /mh	484	1,400.00 /tn	764	-	-	-	-	-	-	1,248	1,441
	Waterstop Adeka or Swellstop	3510.610	16.00 lf	31.00 /mh	45	8.50 /lf	143	-	-	-	-	-	-	187	205
	Encase 18" SE Below UV		16.00 CY		5,236		5,870	/CY						11,105	13,200
	CML Ductile Iron				14,982		16,668							31,650	37,643
GEN	General														
	02643-1- 4" DS Underslab														
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	31.00 /mh	744	50.00 /ea	150	-	-	50.00 /ea	150	-	-	1,044	1,345
	Trench Excavtion 4- 6'	2333.010	40.00 lf	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Trench Backfill 4- 6'	2333.020	40.00 lf	31.00 /mh	186	-	-	-	-	-	-	-	-	186	260
	Spoils to Waste	2333.060	23.70 cy	31.00 /mh	73	-	-	-	-	-	-	-	-	73	103
	DI Pipe RJ - Class 350 4	2511.401	40.00 lf	31.00 /mh	124	35.00 /lf	1,540	-	-	-	-	-	-	1,664	1,714
	DI RJ Compact 90 4	2511.514	3.00 ea	31.00 /mh	93	300.00 /ea	900	-	-	-	-	-	-	993	1,030
	DI RJ Compact Solid Sleeve Short 4	2511.523	3.00 ea	31.00 /mh	93	290.00 /ea	870	-	-	-	-	-	-	963	1,000
	Polybag 12" and Smaller	2333.090	40.00 lf	31.00 /mh	12	0.75 /lf	33	-	-	-	-	-	-	45	50
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	340	3,500.00 /mnth	140	480	487
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 mnth	-	-	-	-	-	-	5,500.00 /mnth	220	3,000.00 /mnth	120	340	344
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 mnth	-	-	-	-	-	-	4,500.00 /mnth	180	1,200.00 /mnth	48	228	232
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 mnth	-	-	-	-	-	-	200.00 /mnth	8	100.00 /mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 mnth	-	-	-	-	-	-	2,000.00 /mnth	80	300.00 /mnth	12	92	94
	DI Floor Pipe FLG x MJ w/ Collar 4in x 3ft 0in long	15221.232	3.00 ea	31.00 /mh	186	1,100.00 /ea	3,300	-	-	-	-	-	-	3,486	3,560
	4" DS Underslab		40.00 lf		1,636		6,793	/lf			978		324	9,731	10,405
	02643-1- 4" NPW Underslab														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448
	Trench Excavtion 4- 6'	2333.010	10.00 lf	31.00 /mh	62	-	-	-	-	-	-	-	-	62	87
	Trench Backfill 4- 6'	2333.020	10.00 lf	31.00 /mh	93	-	-	-	-	-	-	-	-	93	130
	Spoils to Waste	2333.060	5.93 cy	31.00 /mh	18	-	-	-	-	-	-	-	-	18	26
	DI Pipe RJ - Class 350 4	2511.401	10.00 lf	31.00 /mh	31	35.00 /lf	385	-	-	-	-	-	-	416	428
	DI RJ Compact 90 4	2511.514	1.00 ea	31.00 /mh	31	300.00 /ea	300	-	-	-	-	-	-	331	343
	DI RJ Compact Solid Sleeve Short 4	2511.523	1.00 ea	31.00 /mh	31	290.00 /ea	290	-	-	-	-	-	-	321	333
	Polybag 12" and Smaller	2333.090	10.00 lf	31.00 /mh	3	0.75 /lf	8	-	-	-	-	-	-	11	13
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 mnth	-	-	-	-	-	-	8,500.00 /mnth	255	3,500.00 /mnth	105	360	365
	John Deere 624 Loader (172 HP) (M)	1900.132	0.03 mnth	-	-	-	-	-	-	5,500.00 /mnth	165	3,000.00 /mnth	90	255	258
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 mnth	-	-	-	-	-	-	4,500.00 /mnth	135	1,200.00 /mnth	36	171	174
	Mikasa Jumping Jack Compactor (L)	1900.138	0.03 mnth	-	-	-	-	-	-	200.00 /mnth	6	100.00 /mnth	3	9	9
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 mnth	-	-	-	-	-	-	2,000.00 /mnth	60	300.00 /mnth	9	69	70
	DI Floor Pipe FLG x MJ w/ Collar 4in x 3ft 0in long	15221.232	1.00 ea	31.00 /mh	124	1,100.00 /ea	1,100	-	-	-	-	-	-	1,224	1,274
	4" NPW Underslab		10.00 lf		641		2,133	/lf			671		243	3,689	3,959
	02643-1- 4" Drain Line Underslab														
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	31.00 /mh	248	50.00 /ea	50	-	-	50.00 /ea	50	-	-	348	448

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02643-1-	4" Drain Line Underslab														
	Trench Excavtion 4- 6'	2333.010	30.00 lf	31.00 /mh	140	-	-	-	-	-	-	-	-	140	195
	Trench Backfill 4- 6'	2333.020	30.00 lf	31.00 /mh	186	-	-	-	-	-	-	-	-	186	260
	Spoils to Waste	2333.060	16.67 cy	31.00 /mh	52	-	-	-	-	-	-	-	-	52	72
	DI Pipe RJ - Class 350 4	2511.401	30.00 lf	31.00 /mh	93	35.00 /lf	1,155	-	-	-	-	-	-	1,248	1,285
	DI RJ Compact 90 4	2511.514	3.00 ea	31.00 /mh	93	300.00 /ea	900	-	-	-	-	-	-	993	1,030
	DI RJ Compact 45 4	2511.514	4.00 ea	31.00 /mh	124	280.00 /ea	1,120	-	-	-	-	-	-	1,244	1,294
	DI RJ Compact Wye 4	2511.528	2.00 ea	31.00 /mh	62	506.00 /ea	1,012	-	-	-	-	-	-	1,074	1,099
	DI RJ Compact Solid Sleeve Long 4	2511.522	1.00 ea	31.00 /mh	31	290.00 /ea	290	-	-	-	-	-	-	321	333
	Polybag 12" and Smaller	2333.090	30.00 lf	31.00 /mh	9	0.75 /lf	25	-	-	-	-	-	-	34	38
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 mnth	-	-	-	-	-	-	8,500.00 /mnth	340	3,500.00 /mnth	140	480	487
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 mnth	-	-	-	-	-	-	5,500.00 /mnth	220	3,000.00 /mnth	120	340	344
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 mnth	-	-	-	-	-	-	4,500.00 /mnth	180	1,200.00 /mnth	48	228	232
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 mnth	-	-	-	-	-	-	200.00 /mnth	8	100.00 /mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 mnth	-	-	-	-	-	-	2,000.00 /mnth	80	300.00 /mnth	12	92	94
	DI Floor Pipe FLG x MJ w/ Collar 4in x 3ft 0in long	15221.232	3.00 ea	31.00 /mh	186	1,100.00 /ea	3,300	-	-	-	-	-	-	3,486	3,560
	Valve Mud 4" 316ss	15110.555	3.00 ea	31.00 /mh	744	2,700.00 /ea	8,100	-	-	-	-	-	-	8,844	9,142
	Valve Stem Extension	2519.100	3.00 ea	31.00 /mh	93	130.00 /ea	390	-	-	-	-	-	-	483	520
	NBG Kit 125# SS 4in	15125.012	3.00 ea	31.00 /mh	28	200.00 /ea	600	-	-	-	-	-	-	628	639
	DI RJ Compact Red 6x4	2511.520	1.00 ea	31.00 /mh	19	330.00 /ea	330	-	-	-	-	-	-	349	356
	DI Pipe RJ - Class 350 6	2511.401	10.00 lf	31.00 /mh	31	27.00 /lf	297	-	-	-	-	-	-	328	340
	4" Drain Line Underslab		30.00 lf		2,138		17,569	/lf			878		324	20,909	21,781
0330 4-	4" DS Underslab Encasement														
	Other Placement Count	3310.360	3.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	240.00 sf	31.00 /mh	1,860	1.50 /sf	378	-	-	-	-	-	-	2,238	2,982
	Place Pipe Encasement	3310.195	11.00 cy	31.00 /mh	365	166.00 /cy	1,954	-	-	-	-	-	-	2,319	2,465
	Nails and Hardware	3150.200	342.00 sf	31.00 /mh	0	0.04 /sf	14	-	-	-	-	-	-	14	14
	Form Ties Specialty	3150.632	30.00 ea	31.00 /mh	186	5.00 /ea	150	-	-	-	-	-	-	336	410
	Pipe Tie Downs (Small)	3150.200	10.00 ea	31.00 /mh	1,240	75.00 /ea	750	-	-	-	-	-	-	1,990	2,486
	Dimension Lumber	3150.200	342.00 sf	31.00 /mh	0	0.50 /sf	171	-	-	-	-	-	-	171	171
	Oil SOG Form	3100.310	342.00 sf	31.00 /mh	0	0.02 /sf	7	-	-	-	-	-	-	7	7
	Finish- Rough	3350.110	180.00 sf	31.00 /mh	50	0.01 /sf	1	-	-	-	-	-	-	51	71
	Liquid Curing Compounds	3390.170	180.00 sf	31.00 /mh	11	0.06 /sf	11	-	-	-	-	-	-	22	26
	Encasement Rebar	3210.104	0.83 tn	31.00 /mh	639	1,400.00 /tn	1,212	-	-	-	-	-	-	1,852	2,108
	4" DS Underslab Encasement		11.00 CY		4,352		4,648	/CY						9,000	10,740
0330 4-	4" NPW Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	112.00 sf	31.00 /mh	868	1.50 /sf	176	-	-	-	-	-	-	1,044	1,392
	Place Pipe Encasement	3310.195	3.00 cy	31.00 /mh	100	166.00 /cy	533	-	-	-	-	-	-	632	672
	Nails and Hardware	3150.200	112.00 sf	31.00 /mh	0	0.04 /sf	4	-	-	-	-	-	-	5	5
	Form Ties Specialty	3150.632	7.00 ea	31.00 /mh	43	5.00 /ea	35	-	-	-	-	-	-	78	96
	Pipe Tie Downs (Small)	3150.200	2.00 ea	31.00 /mh	248	75.00 /ea	150	-	-	-	-	-	-	398	497
	Dimension Lumber	3150.200	112.00 sf	31.00 /mh	0	0.50 /sf	56	-	-	-	-	-	-	56	56
	Oil SOG Form	3100.310	112.00 sf	31.00 /mh	0	0.02 /sf	2	-	-	-	-	-	-	2	2
	Finish- Rough	3350.110	40.00 sf	31.00 /mh	11	0.01 /sf	0	-	-	-	-	-	-	11	16
	Liquid Curing Compounds	3390.170	40.00 sf	31.00 /mh	2	0.06 /sf	2	-	-	-	-	-	-	5	6
	Encasement Rebar	3210.104	0.35 tn	31.00 /mh	271	1,400.00 /tn	515	-	-	-	-	-	-	786	895
	4" NPW Underslab Encasement		5.89 CY		1,544		1,475	/CY						3,019	3,636
0330 4-	4" Drain Underslab Encasement														
	Other Placement Count	3310.360	1.00 ea	-	-	0.01 /ea	0	-	-	-	-	-	-	0	0
	Formwork Pipe Encasement	3100.108	180.00 sf	31.00 /mh	1,395	1.50 /sf	284	-	-	-	-	-	-	1,679	2,237
	Place Pipe Encasement	3310.195	8.00 cy	31.00 /mh	265	166.00 /cy	1,421	-	-	-	-	-	-	1,686	1,792
	Nails and Hardware	3150.200	280.00 sf	31.00 /mh	0	0.04 /sf	11	-	-	-	-	-	-	11	11
	Form Ties Specialty	3150.632	17.00 ea	31.00 /mh	105	5.00 /ea	85	-	-	-	-	-	-	190	233
	Pipe Tie Downs (Small)	3150.200	9.00 ea	31.00 /mh	1,116	75.00 /ea	675	-	-	-	-	-	-	1,791	2,237
	Dimension Lumber	3150.200	280.00 sf	31.00 /mh	0	0.50 /sf	140	-	-	-	-	-	-	140	140
	Oil SOG Form	3100.310	280.00 sf	31.00 /mh	0	0.02 /sf	6	-	-	-	-	-	-	6	6
	Finish- Rough	3350.110	150.00 sf	31.00 /mh	42	0.01 /sf	1	-	-	-	-	-	-	43	59
	Liquid Curing Compounds	3390.170	150.00 sf	31.00 /mh	9	0.06 /sf	9	-	-	-	-	-	-	18	22
	Encasement Rebar	3210.104	0.60 tn	31.00 /mh	465	1,400.00 /tn	882	-	-	-	-	-	-	1,347	1,533
	4" Drain Underslab Encasement		22.13 CY		3,398		3,513	/CY						6,911	8,271
150-01 1c 12042002	4" DS Suction														
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	3.00 ea	31.00 /mh	186	510.00 /ea	1,530	-	-	-	-	-	-	1,716	1,790
	DI Pipe 4in. dia FxPE - 3ft. 0in.	15221.030	3.00 ea	31.00 /mh	186	350.00 /ea	1,050	-	-	-	-	-	-	1,236	1,310
	DI Flanged 90 ell 4"	15221.430	4.00 ea	31.00 /mh	124	200.00 /ea	800	-	-	-	-	-	-	924	974
	Valve Plug Flange 125# 4in	15110.650	2.00 ea	31.00 /mh	124	1,200.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	PS Pipe Stand for 4in DIP 4ft 0in floor to CL HDG	15060.406	2.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	NBG Kit 125# Steel 4in	15125.010	16.00 ea	31.00 /mh	248	25.00 /ea	400	-	-	-	-	-	-	648	747
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	4.00 ea	31.00 /mh	186	92.00 /ea	368	-	-	-	-	-	-	554	628
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	PS Expansion Anchor 5/8 x 7in SS	15060.127	8.00 ea	31.00 /mh	25	14.00 /ea	112	-	-	-	-	-	-	137	147
	PS Pipe Stand grout	15060.404	2.00 ea	31.00 /mh	62	8.00 /ea	16	-	-	-	-	-	-	78	103

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 4" DS Suction														
	DI Flanged Cross 4"	15221.410	1.00 ea	31.00 /mh	62	530.00 /ea	530	-	-	-	-	-	-	592	617
	Water Tap Saddle 4 X 1"	2519.424	4.00 ea	31.00 /mh	124	70.00 /ea	280	-	-	-	-	-	-	404	454
	NBG Kit 125# Insulating 4in [insu kits are insulating components only]	15125.016	4.00 ea	31.00 /mh	124	40.00 /ea	160	-	-	-	-	-	-	284	334
	Stainless Steel Nipple 1" x 3"	15212.010	8.00 ea	31.00 /mh	62	8.00 /ea	64	-	-	-	-	-	-	126	151
	Valve Ball Threaded SS 1in	15110.014	4.00 ea	31.00 /mh	108	179.00 /ea	716	-	-	-	-	-	-	824	867
	Instrument - Pressure - Switch High Low	17400.000	2.00 ea	31.00 /mh	124	0.01 /ea	0	-	-	-	-	-	-	124	174
	Instrument - Pressure - Gauge	17400.000	2.00 ea	31.00 /mh	124	1,200.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	Stainless Steel 90 Elbow 1"	15212.040	2.00 ea	31.00 /mh	12	200.00 /ea	400	-	-	-	-	-	-	412	417
	4" DS Suction				2,098		11,301							13,399	14,238
	150-01 1c 12042002 4" DS Discharge														
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	3.00 ea	31.00 /mh	186	510.00 /ea	1,530	-	-	-	-	-	-	1,716	1,790
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	560.00 /ea	1,120	-	-	-	-	-	-	1,244	1,294
	DI Pipe 4in. dia FxPE - 5ft. 0in.	15221.030	3.00 ea	31.00 /mh	279	450.00 /ea	1,350	-	-	-	-	-	-	1,629	1,741
	DI Flanged 90 ell 4"	15221.430	4.00 ea	31.00 /mh	124	200.00 /ea	800	-	-	-	-	-	-	924	974
	DI Flanged Tee 4"	15221.455	2.00 ea	31.00 /mh	124	300.00 /ea	600	-	-	-	-	-	-	724	774
	Valve Check Flange 125# 4in Ball Check	15110.040	2.00 ea	31.00 /mh	124	1,470.00 /ea	2,940	-	-	-	-	-	-	3,064	3,114
	Valve Plug Flange 125# 4in	15110.650	2.00 ea	31.00 /mh	124	1,200.00 /ea	2,400	-	-	-	-	-	-	2,524	2,574
	PS Pipe Stand for 4in DIP 6ft 0in floor to CL HDG	15060.406	2.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	NBG Kit 125# Steel 4in	15125.010	18.00 ea	31.00 /mh	279	25.00 /ea	450	-	-	-	-	-	-	729	841
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	3.00 ea	31.00 /mh	140	92.00 /ea	276	-	-	-	-	-	-	416	471
	DI Blind Flange 4" w/ 1-1/2" Tap	15221.405	2.00 ea	31.00 /mh	62	120.00 /ea	240	-	-	-	-	-	-	302	327
	PS Epoxy Anchor 5/8 x 8-1/2in SS	15060.112	8.00 ea	31.00 /mh	25	18.00 /ea	144	-	-	-	-	-	-	169	179
	PS Pipe Stand grout	15060.404	2.00 ea	31.00 /mh	62	8.00 /ea	16	-	-	-	-	-	-	78	103
	Water Tap Saddle 4 X 1"	2519.424	4.00 ea	31.00 /mh	124	70.00 /ea	280	-	-	-	-	-	-	404	454
	Stainless Steel Nipple 1" x 3"	15212.010	8.00 ea	31.00 /mh	62	8.00 /ea	64	-	-	-	-	-	-	126	151
	Stainless Steel Nipple 1.5" X 3"	15212.010	2.00 ea	31.00 /mh	20	15.00 /ea	30	-	-	-	-	-	-	50	59
	Stainless Steel 90 Elbow 1"	15212.040	2.00 ea	31.00 /mh	12	200.00 /ea	400	-	-	-	-	-	-	412	417
	Valve Ball Threaded SS 1in	15110.014	4.00 ea	31.00 /mh	108	179.00 /ea	716	-	-	-	-	-	-	824	867
	Valve Ball Threaded SS 1-½in	15110.014	2.00 ea	31.00 /mh	71	366.00 /ea	732	-	-	-	-	-	-	803	832
	Instrument - Pressure - Transmitter	17400.000	6.00 ea	31.00 /mh	372	0.01 /ea	0	-	-	-	-	-	-	372	521
	Instrument - Pressure - Gauge	17400.000	6.00 ea	31.00 /mh	372	1,200.00 /ea	7,200	-	-	-	-	-	-	7,572	7,721
	NBG Kit 125# Insulating 4in	15125.016	2.00 ea	31.00 /mh	62	40.00 /ea	80	-	-	-	-	-	-	142	167
	4" DS Discharge				3,042		21,368							24,410	25,627
	150-01 1c 12042002 4" NPW														
	DI Pipe 4in. dia FxF - 2ft. 0in.	15221.010	6.00 ea	31.00 /mh	186	455.00 /ea	2,730	-	-	-	-	-	-	2,916	2,990
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	510.00 /ea	1,020	-	-	-	-	-	-	1,144	1,194
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	560.00 /ea	1,120	-	-	-	-	-	-	1,244	1,294
	DI Pipe 4in. dia FxF - 5ft. 0in.	15221.010	1.00 ea	31.00 /mh	93	610.00 /ea	610	-	-	-	-	-	-	703	740
	DI Pipe 4in. dia FxF - 10ft. 0in.	15221.010	3.00 ea	31.00 /mh	372	900.00 /ea	2,700	-	-	-	-	-	-	3,072	3,221
	DI Pipe 4in. dia FxPE - 4ft. 0in.	15221.030	3.00 ea	31.00 /mh	186	380.00 /ea	1,140	-	-	-	-	-	-	1,326	1,400
	DI Flanged 90 ell 4"	15221.430	8.00 ea	31.00 /mh	372	200.00 /ea	1,600	-	-	-	-	-	-	1,972	2,121
	DI Flanged Tee 4"	15221.455	5.00 ea	31.00 /mh	233	300.00 /ea	1,500	-	-	-	-	-	-	1,733	1,826
	Valve Check Flange 125# 4in	15110.040	3.00 ea	31.00 /mh	186	1,580.00 /ea	4,740	-	-	-	-	-	-	4,926	5,000
	Valve Plug Flange 125# 4in	15110.650	7.00 ea	31.00 /mh	434	1,200.00 /ea	8,400	-	-	-	-	-	-	8,834	9,008
	PS Pipe Stand for 4in DIP 4ft 0in floor to CL HDG	15060.406	4.00 ea	31.00 /mh	372	0.01 /ea	0	-	-	-	-	-	-	372	521
	NBG Kit 125# Steel 4in	15125.010	48.00 ea	31.00 /mh	744	25.00 /ea	1,200	-	-	-	-	-	-	1,944	2,242
	NBG Kit 125# SS 4in	15125.012	9.00 ea	31.00 /mh	140	200.00 /ea	1,800	-	-	-	-	-	-	1,940	1,995
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	5.00 ea	31.00 /mh	233	92.00 /ea	460	-	-	-	-	-	-	693	786
	DI Blind Flange 4"	15221.405	1.00 ea	31.00 /mh	31	75.00 /ea	75	-	-	-	-	-	-	106	118
	PS Pipe Stand grout	15060.404	4.00 ea	31.00 /mh	62	8.00 /ea	32	-	-	-	-	-	-	94	119
	Water Tap Saddle 4 X 1"	2519.424	5.00 ea	31.00 /mh	78	70.00 /ea	350	-	-	-	-	-	-	428	458
	Instrument - Flow - Magnetic Flow Meter - 4in	17200.000	1.00 ea	31.00 /mh	90	0.01 /ea	0	-	-	-	-	-	-	90	126
	Stainless Steel Nipple 1" x 3"	15212.010	10.00 ea	31.00 /mh	78	8.00 /ea	80	-	-	-	-	-	-	158	188
	Stainless Steel Tee 1"	15212.055	5.00 ea	31.00 /mh	31	350.00 /ea	1,750	-	-	-	-	-	-	1,781	1,793
	Valve Ball Threaded SS 1in	15110.014	5.00 ea	31.00 /mh	135	179.00 /ea	895	-	-	-	-	-	-	1,030	1,084
	4" NPW				4,301		32,202							36,503	38,224
	150-01 1c 12042002 8"/10" ALP Blower Discharge to Digesters														
	PS Clevis Hanger SS 8in	15060.096	7.00 ea	31.00 /mh	217	113.00 /ea	791	-	-	-	-	-	-	1,008	1,095
	PS Clevis Hanger SS 10in	15060.096	7.00 ea	31.00 /mh	217	180.00 /ea	1,260	-	-	-	-	-	-	1,477	1,564
	PS Pipe Stand for 8in DIP 2ft 6in floor to CL SS	15060.408	3.00 ea	31.00 /mh	279	0.01 /ea	0	-	-	-	-	-	-	279	391
	PS Pipe Stand for 10in DIP 2ft 6in floor to CL SS	15060.408	2.00 ea	31.00 /mh	186	0.01 /ea	0	-	-	-	-	-	-	186	260
	NBG Kit 125# SS 8in	15125.012	28.00 ea	31.00 /mh	868	250.00 /ea	7,000	-	-	-	-	-	-	7,868	8,215
	NBG Kit 125# SS 10in	15125.012	22.00 ea	31.00 /mh	1,364	500.00 /ea	11,000	-	-	-	-	-	-	12,364	12,910
	PS Pipe Stand grout	15060.404	5.00 ea	31.00 /mh	155	8.00 /ea	40	-	-	-	-	-	-	195	257
	Fab Stainless Steel Pipe - 8" - *	15233.505	20.00 ea	31.00 /mh	2,480	/ea		-	-	-	-	-	-	2,480	3,472
	Fab Stainless Steel Pipe - 10" - *	15233.505	14.00 ea	31.00 /mh	1,736	/ea		-	-	-	-	-	-	1,736	2,430
	Expansion Joint Flanged SS 8"	15112.070	3.00 ea	31.00 /mh	372	3,700.00 /ea	11,100	-	-	-	-	-	-	11,472	11,621
	Expansion Joint Flanged SS 10"	15112.070	3.00 ea	31.00 /mh	372	4,100.00 /ea	12,300	-	-	-	-	-	-	12,672	12,821
	Valve Check Swing Flange 10" Double Disc	15110.058	2.00 ea	31.00 /mh	248	2,800.00 /ea	5,600	-	-	-	-	-	-	5,848	5,947
	Valve Check Swing Flange 8" Double Disc	15110.058	3.00 ea	31.00 /mh	279	1,490.00 /ea	4,470	-	-	-	-	-	-	4,749	4,861
	Valve Butterfly Lugged 125# 8in	15110.026	3.00 ea	31.00 /mh	186	1,450.00 /ea	4,350	-	-	-	-	-	-	4,536	4,610

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 8"/10" ALP Blower Discharge to Digesters														
	Valve Butterfly Lugged 125# 10in	15110.026	2.00 ea	31.00 /mh	124	1,700.00 /ea	3,400	-	-	-	-	-	-	3,524	3,574
	NBG Kit 125# Insulating 8in	15125.016	3.00 ea	31.00 /mh	93	100.00 /ea	300	-	-	-	-	-	-	393	430
	NBG Kit 125# Insulating 10in	15125.016	2.00 ea	31.00 /mh	62	120.00 /ea	240	-	-	-	-	-	-	302	327
	Backer Rod and Caulk Sleeve 12in	15124.100	3.00 ea	31.00 /mh	186	50.00 /ea	150	-	-	-	-	-	-	336	410
	Backer Rod and Caulk Sleeve 18in	15124.100	2.00 ea	31.00 /mh	124	100.00 /ea	200	-	-	-	-	-	-	324	374
	PS Ceiling Plate For 5/8" Rod SS	15060.093	12.00 ea	31.00 /mh	327	60.00 /ea	720	-	-	-	-	-	-	1,047	1,178
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	31.00 /mh	186	15.00 /lf	300	-	-	-	-	-	-	486	560
	PS Threaded Rod 5/8in SS	15060.502	70.00 lf	31.00 /mh	217	6.00 /lf	420	-	-	-	-	-	-	637	724
	PS Expansion Anchor 5/8 x 8-1/2in SS	15060.127	20.00 ea	31.00 /mh	62	17.00 /ea	340	-	-	-	-	-	-	402	427
	PS Misc Hardware for Clevis Hanger Assemblies	15060.290	1.00 ls	31.00 /mh	8	0.01 /ls	0	-	-	-	-	-	-	8	11
	Restrained Dismantling Joint 8" SS Bolts	15112.085	1.00 ea	31.00 /mh	124	1,400.00 /ea	1,400	-	-	-	-	-	-	1,524	1,574
	Restrained Dismantling Joint 10" SS Bolts	15112.085	1.00 ea	31.00 /mh	124	3,000.00 /ea	3,000	-	-	-	-	-	-	3,124	3,174
	8"/10" ALP Blower Discharge to Digesters				10,596		68,381							78,977	83,216
	150-55 80 1" Sample Line														
	PVC Sch 80 PIPE 1" PE	15211.203	20.00 lf	31.00 /mh	130	2.00 /lf	40	-	-	-	-	-	-	170	222
	PVC Sch 80 90 EL 1" S	15211.207	4.00 ea	31.00 /mh	26	2.10 /ea	8	-	-	-	-	-	-	34	45
	PVC Sch 80 45 EL 1" SOCxSOC	15211.208	4.00 ea	31.00 /mh	26	4.40 /ea	18	-	-	-	-	-	-	44	54
	PVC Sch 80 TEE 1" S	15211.211	1.00 ea	31.00 /mh	7	3.70 /ea	4	-	-	-	-	-	-	10	13
	PVC Sch 80 Straight CPLG 1" S	15211.204	1.00 ea	31.00 /mh	7	2.00 /ea	2	-	-	-	-	-	-	9	11
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	4.00 ea	31.00 /mh	26	4.10 /ea	16	-	-	-	-	-	-	42	53
	PVC Valve Ball True Union Viton 1" S & T	15211.310	2.00 ea	31.00 /mh	13	45.00 /ea	90	-	-	-	-	-	-	103	108
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	31.00 /mh	93	15.00 /lf	150	-	-	-	-	-	-	243	280
	PS 2 Piece Clamp SS 1in	15060.518	10.00 ea	31.00 /mh	93	5.00 /ea	50	-	-	-	-	-	-	143	180
	PS Expansion Anchor 3/8 x 5in SS	15060.127	10.00 ea	31.00 /mh	16	5.00 /ea	50	-	-	-	-	-	-	66	72
	PS Clevis Hanger EG 1in	15060.094	3.00 ea	31.00 /mh	28	12.00 /ea	36	-	-	-	-	-	-	64	75
	PS Threaded Rod 3/8in EG	15060.502	15.00 lf	31.00 /mh	47	2.00 /lf	30	-	-	-	-	-	-	77	95
	PS Hex Nut EG 3/8	15060.354	9.00 ea	31.00 /mh	14	0.50 /ea	5	-	-	-	-	-	-	18	24
	PS Washer Flat 3/8 EG	15060.576	9.00 ea	31.00 /mh	70	3.00 /ea	27	-	-	-	-	-	-	97	125
	PS Beam/C Clamp W/lk Nut 3/8	15060.082	3.00 ea	31.00 /mh	9	15.00 /ea	45	-	-	-	-	-	-	54	58
	1" Sample Line		20.00 lf		603		571	/lf						1,174	1,415
	GEN General				34,350		169,953				2,527		891	207,722	221,513
	550 UV and Digester Blower Building				49,332		186,621	/LS			2,527		891	239,372	259,155
	600 Aerobic Digester 5 and 6														
	GEN General														
	150-01 1c 12042002 4" DS in Digesters 5 & 6														
	DI Pipe 4in. dia FxF - 2ft. 0in.	15221.010	4.00 ea	31.00 /mh	248	455.00 /ea	1,820	-	-	-	-	-	-	2,068	2,167
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	510.00 /ea	1,020	-	-	-	-	-	-	1,144	1,194
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	186	560.00 /ea	1,120	-	-	-	-	-	-	1,306	1,380
	DI Pipe 4in. dia FxF - 5ft. 0in.	15221.010	2.00 ea	31.00 /mh	248	610.00 /ea	1,220	-	-	-	-	-	-	1,468	1,567
	DI Pipe 4in. dia FxF - 6ft. 0in.	15221.010	2.00 ea	31.00 /mh	248	850.00 /ea	1,700	-	-	-	-	-	-	1,948	2,047
	DI Pipe 4in. dia FxF - 10ft. 0in.	15221.010	2.00 ea	31.00 /mh	310	900.00 /ea	1,800	-	-	-	-	-	-	2,110	2,234
	DI Pipe 4in. dia FxF - 18ft. 0in.	15221.010	2.00 ea	31.00 /mh	372	1,300.00 /ea	2,600	-	-	-	-	-	-	2,972	3,121
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	310	750.00 /ea	1,500	-	-	-	-	-	-	1,810	1,934
	DI Pipe 4in. dia FxPE - 18ft. 0in.	15221.030	4.00 ea	31.00 /mh	744	1,200.00 /ea	4,800	-	-	-	-	-	-	5,544	5,842
	DI Flanged 90 ell 4"	15221.430	5.00 ea	31.00 /mh	155	200.00 /ea	1,000	-	-	-	-	-	-	1,155	1,217
	DI Flanged 45 ell 4"	15221.425	10.00 ea	31.00 /mh	310	200.00 /ea	2,000	-	-	-	-	-	-	2,310	2,434
	DI Flanged Tee 4"	15221.455	3.00 ea	31.00 /mh	186	300.00 /ea	900	-	-	-	-	-	-	1,086	1,160
	DI Flanged Wye 4"	15221.460	6.00 ea	31.00 /mh	372	500.00 /ea	3,000	-	-	-	-	-	-	3,372	3,521
	Link Seal Size LS-475-S	15123.100	28.00 ea	31.00 /mh	130	16.00 /ea	448	-	-	-	-	-	-	578	630
	Sleeve Steel WS-8-18-S- [all sleeves are 16" long, 304SS]	15121.800	2.00 ea	31.00 /mh	248	800.00 /ea	1,600	-	-	-	-	-	-	1,848	1,947
	Valve Check Flange 125# 4in	15110.040	2.00 ea	31.00 /mh	124	1,580.00 /ea	3,160	-	-	-	-	-	-	3,284	3,334
	Valve Plug Flange 125# 4in w/ pedestal operator 3ft CL to Base, geared HW	15110.650	6.00 ea	31.00 /mh	1,488	2,290.00 /ea	13,740	-	-	-	-	-	-	15,228	15,823
	PS Knee Brace for 4in DIP 24in horizontal length SS	15060.280	10.00 ea	31.00 /mh	1,240	0.01 /ea	0	-	-	-	-	-	-	1,240	1,736
	NBG Kit 125# SS 4in	15125.012	54.00 ea	31.00 /mh	837	200.00 /ea	10,800	-	-	-	-	-	-	11,637	11,972
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	12.00 ea	31.00 /mh	558	200.00 /ea	2,400	-	-	-	-	-	-	2,958	3,181
	DI Blind Flange 4"	15221.405	5.00 ea	31.00 /mh	155	75.00 /ea	375	-	-	-	-	-	-	530	592
	PS Expansion Anchor 3/4 x 8-1/2in SS	15060.127	40.00 ea	31.00 /mh	124	25.00 /ea	1,000	-	-	-	-	-	-	1,124	1,174
	Grout Sleeve 8in	15124.300	2.00 ea	31.00 /mh	124	15.00 /ea	30	-	-	-	-	-	-	154	204
	Valve Stem Extension	2519.100	6.00 ea	31.00 /mh	744	130.00 /ea	780	-	-	-	-	-	-	1,524	1,822
	Valve Box Lid	2519.130	6.00 ea	31.00 /mh	372	20.00 /ea	120	-	-	-	-	-	-	492	641
	4" DS in Digesters 5 & 6				9,957		58,933							68,890	72,873
	150-01 1c 12042002 4" WAS in Digesters 5 & 6														
	DI Pipe 4in. dia FxF - 5ft. 0in.	15221.010	4.00 ea	31.00 /mh	372	610.00 /ea	2,440	-	-	-	-	-	-	2,812	2,961
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	248	750.00 /ea	1,500	-	-	-	-	-	-	1,748	1,847
	DI Flanged 90 ell 4"	15221.430	4.00 ea	31.00 /mh	124	200.00 /ea	800	-	-	-	-	-	-	924	974
	Link Seal Size LS-475-S	15123.100	28.00 ea	31.00 /mh	130	16.00 /ea	448	-	-	-	-	-	-	578	630
	Sleeve Steel WS-8-18-S-	15121.800	2.00 ea	31.00 /mh	248	800.00 /ea	1,600	-	-	-	-	-	-	1,848	1,947
	Valve Plug Flange 125# 4in (V405) w/ Elec Actuator	15110.650	2.00 ea	31.00 /mh	496	6,700.00 /ea	13,400	-	-	-	-	-	-	13,896	14,094
	PS Special Support for 4in DIP - SST - Fancy Wall Support	15060.475	4.00 ea	31.00 /mh	992	0.01 /ea	0	-	-	-	-	-	-	992	1,389
	NBG Kit 125# SS 4in	15125.012	16.00 ea	31.00 /mh	248	200.00 /ea	3,200	-	-	-	-	-	-	3,448	3,547
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	4.00 ea	31.00 /mh	186	200.00 /ea	800	-	-	-	-	-	-	986	1,060

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 4" WAS in Digesters 5 & 6														
	PS Epoxy Anchor 5/8 x 10in SS	15060.112	8.00 ea	31.00 /mh	12	22.00 /ea	176	-	-	-	-	-	-	188	193
	Valve Stem Extension	2519.100	2.00 ea	31.00 /mh	186	130.00 /ea	260	-	-	-	-	-	-	446	520
	Valve Box Top Tyler 26T	2519.130	2.00 ea	31.00 /mh	124	70.00 /ea	140	-	-	-	-	-	-	264	314
	Grout Sleeve 8in	15124.300	2.00 ea	31.00 /mh	124	15.00 /ea	30	-	-	-	-	-	-	154	204
	4" WAS in Digesters 5 & 6				3,491		24,794							28,285	29,681
	150-01 1c 12042002 4"/6" DEC in Digesters 5 & 6														
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	1.00 ea	31.00 /mh	62	560.00 /ea	560	-	-	-	-	-	-	622	647
	DI Pipe 4in. dia FxF - 7ft. 0in.	15221.010	2.00 ea	31.00 /mh	186	720.00 /ea	1,440	-	-	-	-	-	-	1,626	1,700
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	750.00 /ea	750	-	-	-	-	-	-	874	924
	DI Pipe 6in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	900.00 /ea	900	-	-	-	-	-	-	1,024	1,074
	DI Flanged 90 ell 4"	15221.430	2.00 ea	31.00 /mh	62	200.00 /ea	400	-	-	-	-	-	-	462	487
	Link Seal Size LS-410-S	15123.100	20.00 ea	31.00 /mh	93	16.00 /ea	320	-	-	-	-	-	-	413	450
	Link Seal Size LS-475-S	15123.100	14.00 ea	31.00 /mh	65	16.00 /ea	224	-	-	-	-	-	-	289	315
	Sleeve Steel WS-8-18-S-	15121.800	1.00 ea	31.00 /mh	124	800.00 /ea	800	-	-	-	-	-	-	924	974
	Sleeve Steel WS-10-36-S-	15121.800	1.00 ea	31.00 /mh	124	1,000.00 /ea	1,000	-	-	-	-	-	-	1,124	1,174
	PS Special Support for 4in DIP -SS Fancy Wall Support	15060.475	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	NBG Kit 125# SS 4in	15125.012	7.00 ea	31.00 /mh	109	200.00 /ea	1,400	-	-	-	-	-	-	1,509	1,552
	NBG Kit 125# SS 6in	15125.012	2.00 ea	31.00 /mh	62	250.00 /ea	500	-	-	-	-	-	-	562	587
	PS Epoxy Anchor 5/8 x 10in SS	15060.112	8.00 ea	31.00 /mh	25	22.00 /ea	176	-	-	-	-	-	-	201	211
	Valve Telescoping 4" w/ Elec Actuator on Pedistal, 10ft Flg to Base, 4ft travel	15110.750	1.00 ea	31.00 /mh	744	8,900.00 /ea	8,900	-	-	-	-	-	-	9,644	9,942
	Grout Sleeve 8in	15124.300	1.00 ea	31.00 /mh	62	15.00 /ea	15	-	-	-	-	-	-	77	102
	Grout Sleeve 12in	15124.300	1.00 ea	31.00 /mh	62	20.00 /ea	20	-	-	-	-	-	-	82	107
	NBG Kit 125# Insulating 6in	15125.016	1.00 ea	31.00 /mh	31	60.00 /ea	60	-	-	-	-	-	-	91	103
	NBG Kit 125# Insulating 4in	15125.016	1.00 ea	31.00 /mh	31	40.00 /ea	40	-	-	-	-	-	-	71	83
	Valve Stem Extension	2519.100	1.00 ea	31.00 /mh	31	130.00 /ea	130	-	-	-	-	-	-	161	173
	Valve Box Lid	2519.130	1.00 ea	31.00 /mh	31	20.00 /ea	20	-	-	-	-	-	-	51	63
	4"/6" DEC in Digesters 5 & 6				2,399		17,655							20,054	21,014
	150-01 1c 12042002 8"/10" ALP from New Blower Building														
	Link Seal Size LS-400-S	15123.100	48.00 ea	31.00 /mh	223	16.00 /ea	768	-	-	-	-	-	-	991	1,080
	Sleeve Steel WS-12-37-S-	15121.800	2.00 ea	31.00 /mh	248	1,200.00 /ea	2,400	-	-	-	-	-	-	2,648	2,747
	PS Knee Brace for 10in DIP 24in horizontal length SS	15060.280	4.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	PS Special Support for 8in DIP -SST Misc Metals	15060.475	11.00 ea	31.00 /mh		0.01 /ea	0	-	-	-	-	-	-	0	0
	NBG Kit 125# SS 8in	15125.012	32.00 ea	31.00 /mh	992	250.00 /ea	8,000	-	-	-	-	-	-	8,992	9,389
	NBG Kit 125# SS 10in	15125.012	22.00 ea	31.00 /mh	682	500.00 /ea	11,000	-	-	-	-	-	-	11,682	11,955
	Fab Stainless Steel Pipe - 8" - *	15233.505	29.00 ea	31.00 /mh	3,596	/ea		-	-	-	-	-	-	3,596	5,034
	Fab Stainless Steel Pipe - 10" - *	15233.505	16.00 ea	31.00 /mh	1,984	/ea		-	-	-	-	-	-	1,984	2,778
	Valve Butterfly Lugged 125# 8in	15110.026	1.00 ea	31.00 /mh	93	1,450.00 /ea	1,450	-	-	-	-	-	-	1,543	1,580
	Valve Butterfly Lugged 125# 10in	15110.026	1.00 ea	31.00 /mh	93	1,700.00 /ea	1,700	-	-	-	-	-	-	1,793	1,830
	Expansion Joint Flanged SS 8"	15112.070	4.00 ea	31.00 /mh	496	3,700.00 /ea	14,800	-	-	-	-	-	-	15,296	15,494
	Expansion Joint Flanged SS 10"	15112.070	3.00 ea	31.00 /mh	372	4,100.00 /ea	12,300	-	-	-	-	-	-	12,672	12,821
	PS Epoxy Anchor 3/4 x 8-1/2in SS	15060.112	28.00 ea	31.00 /mh	87	24.00 /ea	672	-	-	-	-	-	-	759	794
	Grout Sleeve 12in	15124.300	2.00 ea	31.00 /mh	124	20.00 /ea	40	-	-	-	-	-	-	164	214
	8"/10" ALP from New Blower Building				9,486		53,130							62,616	66,411
	150-01 1c 12042002 6" ALP from Existing Blowers														
	Link Seal Size LS-410-S	15123.100	48.00 ea	31.00 /mh	223	16.00 /ea	768	-	-	-	-	-	-	991	1,080
	Sleeve Steel WS-10-36-S-	15121.800	2.00 ea	31.00 /mh	248	1,000.00 /ea	2,000	-	-	-	-	-	-	2,248	2,347
	PS Knee Brace for 6in DIP 24in horizontal length SS	15060.280	4.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	NBG Kit 125# SS 6in	15125.012	18.00 ea	31.00 /mh	279	250.00 /ea	4,500	-	-	-	-	-	-	4,779	4,891
	Fab Stainless Steel Pipe - 6" - *	15233.505	10.00 ea	31.00 /mh	930	/ea		-	-	-	-	-	-	930	1,302
	Valve Butterfly Lugged 125# 6in	15110.026	2.00 ea	31.00 /mh	124	1,250.00 /ea	2,500	-	-	-	-	-	-	2,624	2,674
	FCV Valve Butterfly 125# 6in Elec Actuator	15110.034	2.00 ea	31.00 /mh	248	6,600.00 /ea	13,200	-	-	-	-	-	-	13,448	13,547
	PS Expansion Anchor 5/8 x 7in SS	15060.127	16.00 ea	31.00 /mh	50	14.00 /ea	224	-	-	-	-	-	-	274	293
	Grout Sleeve 12in	15124.300	2.00 ea	31.00 /mh	124	20.00 /ea	40	-	-	-	-	-	-	164	214
	6" ALP from Existing Blowers				2,722		23,232							25,954	27,043
	GEN General				28,055		177,744							205,799	217,021
	600 Aerobic Digester 5 and 6				28,055		177,744	/LS						205,799	217,021
	650 Existing Digester 1 to 4														
	GEN General														
	150-01 1c 12042002 4" DS in Digesters 1 - 4														
	DI Pipe 4in. dia FxF - 2ft. 0in.	15221.010	8.00 ea	31.00 /mh	496	455.00 /ea	3,640	-	-	-	-	-	-	4,136	4,334
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	4.00 ea	31.00 /mh	248	510.00 /ea	2,040	-	-	-	-	-	-	2,288	2,387
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	4.00 ea	31.00 /mh	248	560.00 /ea	2,240	-	-	-	-	-	-	2,488	2,587
	DI Pipe 4in. dia FxF - 5ft. 0in.	15221.010	5.00 ea	31.00 /mh	465	610.00 /ea	3,050	-	-	-	-	-	-	3,515	3,701
	DI Pipe 4in. dia FxF - 6ft. 0in.	15221.010	2.00 ea	31.00 /mh	248	850.00 /ea	1,700	-	-	-	-	-	-	1,948	2,047
	DI Pipe 4in. dia FxF - 10ft. 0in.	15221.010	2.00 ea	31.00 /mh	248	900.00 /ea	1,800	-	-	-	-	-	-	2,048	2,147
	DI Pipe 4in. dia FxF - 18ft. 0in.	15221.010	4.00 ea	31.00 /mh	744	1,300.00 /ea	5,200	-	-	-	-	-	-	5,944	6,242
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	5.00 ea	31.00 /mh	620	750.00 /ea	3,750	-	-	-	-	-	-	4,370	4,618
	DI Pipe 4in. dia FxPE - 18ft. 0in.	15221.030	6.00 ea	31.00 /mh	1,116	1,200.00 /ea	7,200	-	-	-	-	-	-	8,316	8,762
	DI Flanged 90 ell 4"	15221.430	11.00 ea	31.00 /mh	341	200.00 /ea	2,200	-	-	-	-	-	-	2,541	2,677
	DI Flanged 45 ell 4"	15221.425	20.00 ea	31.00 /mh	620	200.00 /ea	4,000	-	-	-	-	-	-	4,620	4,868

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 4" DS in Digesters 1 - 4														
	DI Flanged Tee 4"	15221.455	6.00 ea	31.00 /mh	372	300.00 /ea	1,800	-	-	-	-	-	-	2,172	2,321
	DI Flanged Wye 4"	15221.460	12.00 ea	31.00 /mh	744	500.00 /ea	6,000	-	-	-	-	-	-	6,744	7,042
	Link Seal Size LS-475-S	15123.100	86.00 ea	31.00 /mh	400	16.00 /ea	1,376	-	-	-	-	-	-	1,776	1,936
	Core Drilled Hole - 8 -*	15122.100	5.00 ea	31.00 /mh	155	200.00 /ea	1,000	150.00 /ea	750	-	-	-	-	1,905	1,967
	Valve Check Flange 125# 4in	15110.040	4.00 ea	31.00 /mh	248	1,580.00 /ea	6,320	-	-	-	-	-	-	6,568	6,667
	Valve Plug Flange 125# 4in w/ pedestal operator 3ft CL to Base, geared HW	15110.650	13.00 ea	31.00 /mh	3,224	2,290.00 /ea	29,770	-	-	-	-	-	-	32,994	34,284
	PS Pipe Stand for 4in DIP 4ft 0in floor to CL SS	15060.408	1.00 ea	31.00 /mh	93	0.01 /ea	0	-	-	-	-	-	-	93	130
	PS Knee Brace for 4in DIP 24in horizontal length SS	15060.280	20.00 ea	31.00 /mh	2,480	0.01 /ea	0	-	-	-	-	-	-	2,480	3,472
	NBG Kit 125# SS 4in	15125.012	112.00 ea	31.00 /mh	1,736	200.00 /ea	22,400	-	-	-	-	-	-	24,136	24,830
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	24.00 ea	31.00 /mh	1,116	200.00 /ea	4,800	-	-	-	-	-	-	5,916	6,362
	DI Blind Flange 4"	15221.405	10.00 ea	31.00 /mh	310	75.00 /ea	750	-	-	-	-	-	-	1,060	1,184
	PS Expansion Anchor 3/4 x 8-1/2in SS	15060.127	84.00 ea	31.00 /mh	260	25.00 /ea	2,100	-	-	-	-	-	-	2,360	2,465
	PS Pipe Stand grout	15060.404	1.00 ea	31.00 /mh	31	8.00 /ea	8	-	-	-	-	-	-	39	51
	Grout Sleeve 8in	15124.300	7.00 ea	31.00 /mh	434	15.00 /ea	105	-	-	-	-	-	-	539	713
	Valve Stem Extension	2519.100	12.00 ea	31.00 /mh	372	130.00 /ea	1,560	-	-	-	-	-	-	1,932	2,081
	Valve Box Lid	2519.130	12.00 ea	31.00 /mh	93	20.00 /ea	240	-	-	-	-	-	-	333	370
	Core Drilled Hole - 8 -*	15122.100	1.00 ea	31.00 /mh	31	200.00 /ea	200	150.00 /ea	150	-	-	-	-	381	393
	Valve Telescoping 4" w/ Elec Actuator on Pedistal, 10ft Flg to Base, 4ft travel	15110.750	1.00 ea	31.00 /mh	744	8,900.00 /ea	8,900	-	-	-	-	-	-	9,644	9,942
	4" DS in Digesters 1 - 4				18,237		124,149		900					143,287	150,581
	150-01 1c 12042002 8"/10" ALP from New Blowers														
	Link Seal Size LS-400-S	15123.100	96.00 ea	31.00 /mh	446	16.00 /ea	1,536	-	-	-	-	-	-	1,982	2,161
	Sleeve Steel WS-12-37-S-	15121.800	4.00 ea	31.00 /mh	496	1,200.00 /ea	4,800	-	-	-	-	-	-	5,296	5,494
	PS Clevis Hanger SS 8in	15060.096	6.00 ea	31.00 /mh	186	113.00 /ea	678	-	-	-	-	-	-	864	938
	PS Special Support for 8in DIP - SST	15060.475	8.00 ea	31.00 /mh	992	0.01 /ea	0	-	-	-	-	-	-	992	1,389
	NBG Kit 125# SS 6in	15125.012	8.00 ea	31.00 /mh	124	250.00 /ea	2,000	-	-	-	-	-	-	2,124	2,174
	NBG Kit 125# SS 8in	15125.012	36.00 ea	31.00 /mh	1,116	250.00 /ea	9,000	-	-	-	-	-	-	10,116	10,562
	NBG Kit 125# SS 10in	15125.012	8.00 ea	31.00 /mh	248	500.00 /ea	4,000	-	-	-	-	-	-	4,248	4,347
	Fab Stainless Steel Pipe - 8" - *	15233.505	27.00 ea	31.00 /mh	3,348	/ea	/ea	-	-	-	-	-	-	3,348	4,687
	Fab Stainless Steel Pipe - 10" - *	15233.505	4.00 ea	31.00 /mh	496	/ea	/ea	-	-	-	-	-	-	496	694
	Expansion Joint Flanged SS 8"	15112.070	4.00 ea	31.00 /mh	496	3,700.00 /ea	14,800	-	-	-	-	-	-	15,296	15,494
	Expansion Joint Flanged SS 10"	15112.070	1.00 ea	31.00 /mh	124	4,100.00 /ea	4,100	-	-	-	-	-	-	4,224	4,274
	Valve Butterfly Lugged 125# 8in	15110.026	3.00 ea	31.00 /mh	279	1,450.00 /ea	4,350	-	-	-	-	-	-	4,629	4,741
	Valve Butterfly Lugged 125# 10in	15110.026	1.00 ea	31.00 /mh	93	1,700.00 /ea	1,700	-	-	-	-	-	-	1,793	1,830
	Valve Butterfly Lugged 125# 6in	15110.026	1.00 ea	31.00 /mh	62	1,250.00 /ea	1,250	-	-	-	-	-	-	1,312	1,337
	Fab Stainless Steel Pipe - 6" - *	15233.505	4.00 ea	31.00 /mh	248	/ea	/ea	-	-	-	-	-	-	248	347
	PS Ceiling Plate For 3/4" Rod SS	15060.093	5.00 ea	31.00 /mh	136	60.00 /ea	300	-	-	-	-	-	-	436	491
	PS Expansion Anchor 3/4 x 7in SS	15060.127	36.00 ea	31.00 /mh	112	17.00 /ea	612	-	-	-	-	-	-	724	768
	Grout Sleeve 12in	15124.300	4.00 ea	31.00 /mh	248	20.00 /ea	80	-	-	-	-	-	-	328	427
	8"/10" ALP from New Blowers				9,250		49,206							58,456	62,157
	150-01 1c 12042002 6" ALP from Existing Blowers														
	PS Pipe Stand for 6in DIP 2ft 0in floor to CL SS	15060.408	4.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	NBG Kit 125# SS 6in	15125.012	28.00 ea	31.00 /mh	434	250.00 /ea	7,000	-	-	-	-	-	-	7,434	7,608
	PS Expansion Anchor 5/8 x 7in SS	15060.127	8.00 ea	31.00 /mh	25	14.00 /ea	112	-	-	-	-	-	-	137	147
	PS Pipe Stand grout	15060.404	4.00 ea	31.00 /mh	124	8.00 /ea	32	-	-	-	-	-	-	156	206
	Fab Stainless Steel Pipe - 6" - *	15233.505	20.00 ea	31.00 /mh	1,240	/ea	/ea	-	-	-	-	-	-	1,240	1,736
	Valve Butterfly Lugged 125# 6in	15110.026	4.00 ea	31.00 /mh	248	1,250.00 /ea	5,000	-	-	-	-	-	-	5,248	5,347
	6" ALP from Existing Blowers				2,567		12,144							14,711	15,738
	150-01 1c 12042002 4" Existing WAS														
	DI Pipe 4in. dia FxPE - 6ft. 0in.	15221.030	12.00 ea	31.00 /mh	1,116	600.00 /ea	7,200	-	-	-	-	-	-	8,316	8,762
	Valve Plug Flange 125# 4in	15110.650	5.00 ea	31.00 /mh	465	1,200.00 /ea	6,000	-	-	-	-	-	-	6,465	6,651
	Valve Plug Flange 125# 4in w/ Elec Actuator	15110.650	1.00 ea	31.00 /mh	124	6,700.00 /ea	6,700	-	-	-	-	-	-	6,824	6,874
	PS Clevis Hanger SS 4in	15060.096	6.00 ea	31.00 /mh	186	47.00 /ea	282	-	-	-	-	-	-	468	542
	NBG Kit 125# SS 4in	15125.012	12.00 ea	31.00 /mh	186	200.00 /ea	2,400	-	-	-	-	-	-	2,586	2,660
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	6.00 ea	31.00 /mh	279	200.00 /ea	1,200	-	-	-	-	-	-	1,479	1,591
	PS Ceiling Plate For 5/8" Rod SS	15060.093	6.00 ea	31.00 /mh	164	60.00 /ea	360	-	-	-	-	-	-	524	589
	PS Expansion Anchor 5/8 x 7in SS	15060.127	46.00 ea	31.00 /mh	143	14.00 /ea	644	-	-	-	-	-	-	787	844
	PS Threaded Rod 5/8in SS	15060.502	40.00 lf	31.00 /mh	124	6.00 /lf	240	-	-	-	-	-	-	364	414
	4" Existing WAS				2,786		25,026							27,812	28,927
	GEN General				32,841		210,525		900					244,266	257,402
	650 Existing Digester 1 to 4				32,841		210,525	/LS	900					244,266	257,402
	850 Existing RAS/WAS														
	GEN General														
	150-01 1c 12042002 4" WAS/SCUM Suction														
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	186	560.00 /ea	1,120	-	-	-	-	-	-	1,306	1,380
	DI Pipe 4in. dia FxF - 2ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	455.00 /ea	910	-	-	-	-	-	-	1,034	1,084
	DI Pipe 4in. dia FxF - 7ft. 0in.	15221.010	1.00 ea	31.00 /mh	155	720.00 /ea	720	-	-	-	-	-	-	875	937
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	3.00 ea	31.00 /mh	279	510.00 /ea	1,530	-	-	-	-	-	-	1,809	1,921
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	155	750.00 /ea	750	-	-	-	-	-	-	905	967
	DI Flanged 90 ell 4"	15221.430	5.00 ea	31.00 /mh	155	200.00 /ea	1,000	-	-	-	-	-	-	1,155	1,217
	DI Flanged Tee 4"	15221.455	2.00 ea	31.00 /mh	93	300.00 /ea	600	-	-	-	-	-	-	693	730

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 4" WAS/SCUM Suction														
	Valve Plug Flange 125# 4in	15110.650	4.00 ea	31.00 /mh	248	1,200.00 /ea	4,800	-	-	-	-	-	-	5,048	5,147
	PS Pipe Stand for 4in DIP 3ft 0in floor to CL HDG	15060.406	4.00 ea	31.00 /mh	496	850.00 /ea	3,400	-	-	-	-	-	-	3,896	4,094
	PS Pipe Stand for 4in DIP 5ft 0in floor to CL HDG	15060.406	1.00 ea	31.00 /mh	124	850.00 /ea	850	-	-	-	-	-	-	974	1,024
	NBG Kit 125# Steel 4in	15125.010	26.00 ea	31.00 /mh	403	25.00 /ea	650	-	-	-	-	-	-	1,053	1,214
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	4.00 ea	31.00 /mh	186	92.00 /ea	368	-	-	-	-	-	-	554	628
	PS Expansion Anchor 5/8 x 7in SS	15060.127	20.00 ea	31.00 /mh	62	14.00 /ea	280	-	-	-	-	-	-	342	367
	PS Pipe Stand grout	15060.404	5.00 ea	31.00 /mh	155	8.00 /ea	40	-	-	-	-	-	-	195	257
	NBG Kit 125# Insulating 4in	15125.016	3.00 ea	31.00 /mh	93	40.00 /ea	120	-	-	-	-	-	-	213	250
	Grout Sleeve 8in	15124.300	1.00 ea	31.00 /mh	62	15.00 /ea	15	-	-	-	-	-	-	77	102
	Link Seal Size LS-475-S	15123.100	16.00 ea	31.00 /mh	74	16.00 /ea	256	-	-	-	-	-	-	330	360
	DI MEGALUG for DIP 4"	2511.610	1.00 ea	31.00 /mh	16	25.00 /ea	25	-	-	-	-	-	-	41	47
	4" WAS/SCUM Suction				3,066		17,434							20,500	21,726
	150-01 1c 12042002 10" RAS Suction														
	DI Pipe 10in. dia FxF - 2ft. 0in.	15221.010	6.00 ea	31.00 /mh	372	1,500.00 /ea	9,000	-	-	-	-	-	-	9,372	9,521
	DI Pipe 10in. dia FxF - 3ft. 0in.	15221.010	2.00 ea	31.00 /mh	124	1,500.00 /ea	3,000	-	-	-	-	-	-	3,124	3,174
	DI Pipe 10in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	31.00 /mh	186	1,500.00 /ea	3,000	-	-	-	-	-	-	3,186	3,260
	DI Pipe 10in. dia FxF - 5ft. 0in.	15221.010	1.00 ea	31.00 /mh	93	1,650.00 /ea	1,650	-	-	-	-	-	-	1,743	1,780
	DI Pipe 10in. dia FxF - 6ft. 0in.	15221.010	3.00 ea	31.00 /mh	372	1,700.00 /ea	5,100	-	-	-	-	-	-	5,472	5,621
	DI Pipe 10in. dia FxF - 8ft. 0in.	15221.010	2.00 ea	31.00 /mh	248	1,700.00 /ea	3,400	-	-	-	-	-	-	3,648	3,747
	DI Pipe 10in. dia FxF - 15ft. 0in.	15221.010	1.00 ea	31.00 /mh	186	2,200.00 /ea	2,200	-	-	-	-	-	-	2,386	2,460
	DI Pipe 10in. dia FxPE - 10ft. 0in.	15221.030	4.00 ea	31.00 /mh	620	1,550.00 /ea	6,200	-	-	-	-	-	-	6,820	7,068
	DI Flanged 90 ell 10"	15221.430	6.00 ea	31.00 /mh	372	1,400.00 /ea	8,400	-	-	-	-	-	-	8,772	8,921
	DI Flanged Tee 10"	15221.455	8.00 ea	31.00 /mh	744	1,600.00 /ea	12,800	-	-	-	-	-	-	13,544	13,842
	DI Flanged Con Red 10x4"	15221.445	8.00 ea	31.00 /mh	496	850.00 /ea	6,800	-	-	-	-	-	-	7,296	7,494
	Valve Plug Flange 125# 10in	15110.650	14.00 ea	31.00 /mh	1,302	2,790.00 /ea	39,060	-	-	-	-	-	-	40,362	40,883
	PS Pipe Stand for 10in DIP 4ft 0in floor to CL HDG	15060.406	12.00 ea	31.00 /mh	1,488	850.00 /ea	10,200	-	-	-	-	-	-	11,688	12,283
	NBG Kit 125# Steel 4in	15125.010	8.00 ea	31.00 /mh	124	25.00 /ea	200	-	-	-	-	-	-	324	374
	NBG Kit 125# Steel 10in	15125.010	62.00 ea	31.00 /mh	1,922	90.00 /ea	5,580	-	-	-	-	-	-	7,502	8,271
	DI MEGAFLANGE w/ Galv Bolts for DIP 10"	15112.220	6.00 ea	31.00 /mh	558	300.00 /ea	1,800	-	-	-	-	-	-	2,358	2,581
	PS Expansion Anchor 5/8 x 7in SS	15060.127	48.00 ea	31.00 /mh	149	14.00 /ea	672	-	-	-	-	-	-	821	880
	PS Pipe Stand grout	15060.404	12.00 ea	31.00 /mh	372	8.00 /ea	96	-	-	-	-	-	-	468	617
	NBG Kit 125# Insulating 10in	15125.016	6.00 ea	31.00 /mh	186	120.00 /ea	720	-	-	-	-	-	-	906	980
	Instrument - Flow - Magnetic Flow Meter - 10in	17200.000	4.00 ea	31.00 /mh	496	0.01 /ea	0	-	-	-	-	-	-	496	694
	Link Seal Size LS-340-S	15123.100	204.00 ea	31.00 /mh	949	15.00 /ea	3,060	-	-	-	-	-	-	4,009	4,388
	Grout Sleeve 18in	15124.300	16.00 ea	31.00 /mh	1,488	35.00 /ea	560	-	-	-	-	-	-	2,048	2,643
	DI MEGALUG for DIP 10"	2511.610	4.00 ea	31.00 /mh	62	66.00 /ea	264	-	-	-	-	-	-	326	351
	10" RAS Suction				12,908		123,762							136,670	141,834
	150-01 1c 12042002 4"/8" SCUM/WAS Discharge														
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	7.00 ea	31.00 /mh	434	510.00 /ea	3,570	-	-	-	-	-	-	4,004	4,178
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	1.00 ea	31.00 /mh	93	560.00 /ea	560	-	-	-	-	-	-	653	690
	DI Pipe 4in. dia FxF - 5ft. 6in.	15221.010	1.00 ea	31.00 /mh	124	650.00 /ea	650	-	-	-	-	-	-	774	824
	DI Pipe 4in. dia FxF - 10ft. 0in.	15221.010	2.00 ea	31.00 /mh	310	900.00 /ea	1,800	-	-	-	-	-	-	2,110	2,234
	DI Pipe 8in. dia FxF - 18ft. 0in.	15221.010	1.00 ea	31.00 /mh	186	2,300.00 /ea	2,300	-	-	-	-	-	-	2,486	2,560
	DI Pipe 4in. dia FxPE - 10ft. 0in.	15221.030	2.00 ea	31.00 /mh	310	750.00 /ea	1,500	-	-	-	-	-	-	1,810	1,934
	DI Pipe 8in. dia FxPE - 18ft. 0in.	15221.030	1.00 ea	31.00 /mh	186	2,500.00 /ea	2,500	-	-	-	-	-	-	2,686	2,760
	DI Flanged 90 ell 4"	15221.430	7.00 ea	31.00 /mh	217	200.00 /ea	1,400	-	-	-	-	-	-	1,617	1,704
	DI Flanged Tee 4"	15221.455	2.00 ea	31.00 /mh	124	300.00 /ea	600	-	-	-	-	-	-	724	774
	DI Flanged Con Red 8x4"	15221.445	1.00 ea	31.00 /mh	62	300.00 /ea	300	-	-	-	-	-	-	362	387
	Valve Check Flange 125# 4in	15110.040	3.00 ea	31.00 /mh	186	1,580.00 /ea	4,740	-	-	-	-	-	-	4,926	5,000
	Valve Plug Flange 125# 4in	15110.650	3.00 ea	31.00 /mh	186	1,200.00 /ea	3,600	-	-	-	-	-	-	3,786	3,860
	PS Clevis Hanger HDG 4in	15060.098	8.00 ea	31.00 /mh	248	10.00 /ea	80	-	-	-	-	-	-	328	427
	PS Clevis Hanger HDG 8in	15060.098	4.00 ea	31.00 /mh	124	25.00 /ea	100	-	-	-	-	-	-	224	274
	NBG Kit 125# Steel 4in	15125.010	36.00 ea	31.00 /mh	558	25.00 /ea	900	-	-	-	-	-	-	1,458	1,681
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	4.00 ea	31.00 /mh	186	92.00 /ea	368	-	-	-	-	-	-	554	628
	PS Expansion Anchor 5/8 x 7in SS	15060.127	48.00 ea	31.00 /mh	149	14.00 /ea	672	-	-	-	-	-	-	821	880
	NBG Kit 125# Steel 8in	15125.010	4.00 ea	31.00 /mh	62	50.00 /ea	200	-	-	-	-	-	-	262	287
	Instrument - Flow - Magnetic Flow Meter - 4in	17200.000	2.00 ea	31.00 /mh	248	0.01 /ea	0	-	-	-	-	-	-	248	347
	DI MEGAFLANGE w/ Galv Bolts for DIP 8"	15112.220	2.00 ea	31.00 /mh	186	215.00 /ea	430	-	-	-	-	-	-	616	690
	Instrument - Pressure - Transmitter	17400.000	16.00 ea	31.00 /mh	992	0.01 /ea	0	-	-	-	-	-	-	992	1,389
	PS Ceiling Plate For 5/8" Rod EG	15060.093	12.00 ea	31.00 /mh	327	30.00 /ea	360	-	-	-	-	-	-	687	818
	Link Seal Size LS-400-S	15123.100	18.00 ea	31.00 /mh	84	16.00 /ea	288	-	-	-	-	-	-	372	405
	Grout Sleeve 12in	15124.300	1.00 ea	31.00 /mh	62	20.00 /ea	20	-	-	-	-	-	-	82	107
	DI MEGALUG for DIP 8"	2511.610	1.00 ea	31.00 /mh	16	45.00 /ea	45	-	-	-	-	-	-	61	67
	4"/8" SCUM/WAS Discharge				5,659		26,983							32,643	34,906
	150-01 1c 12042002 10" RAS Discharge														
	DI Pipe 4in. dia FxF - 3ft. 0in.	15221.010	6.00 ea	31.00 /mh	372	510.00 /ea	3,060	-	-	-	-	-	-	3,432	3,581
	DI Pipe 4in. dia FxF - 6ft. 0in.	15221.010	3.00 ea	31.00 /mh	372	850.00 /ea	2,550	-	-	-	-	-	-	2,922	3,071
	DI Pipe 10in. dia FxF - 4ft. 0in.	15221.010	4.00 ea	31.00 /mh	372	1,650.00 /ea	6,600	-	-	-	-	-	-	6,972	7,121
	DI Pipe 10in. dia FxF - 8ft. 0in.	15221.010	2.00 ea	31.00 /mh	248	1,700.00 /ea	3,400	-	-	-	-	-	-	3,648	3,747
	DI Pipe 10in. dia FxF - 10ft. 0in.	15221.010	1.00 ea	31.00 /mh	124	1,800.00 /ea	1,800	-	-	-	-	-	-	1,924	1,974
	DI Pipe 10in. dia FxF - 18ft. 0in.	15221.010	2.00 ea	31.00 /mh	372	2,200.00 /ea	4,400	-	-	-	-	-	-	4,772	4,921

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
150-01 1c 12042002 10" RAS Discharge															
	DI Pipe 10in. dia FxPE - 10ft. 0in.	15221.030	1.00 ea	31.00 /mh	124	1,550.00 /ea	1,550	-	-	-	-	-	-	1,674	1,724
	DI Pipe 10in. dia FxPE - 18ft. 0in.	15221.030	1.00 ea	31.00 /mh	186	3,500.00 /ea	3,500	-	-	-	-	-	-	3,686	3,760
	DI Flanged 90 ell 4"	15221.430	9.00 ea	31.00 /mh	279	200.00 /ea	1,800	-	-	-	-	-	-	2,079	2,191
	DI Flanged 90 ell 10"	15221.430	1.00 ea	31.00 /mh	62	1,400.00 /ea	1,400	-	-	-	-	-	-	1,462	1,487
	DI Flanged Tee 10"	15221.455	1.00 ea	31.00 /mh	93	1,600.00 /ea	1,600	-	-	-	-	-	-	1,693	1,730
	DI Flanged Tee 10x4"	15221.455	6.00 ea	31.00 /mh	372	1,400.00 /ea	8,400	-	-	-	-	-	-	8,772	8,921
	Valve Check Flange 125# 4in	15110.040	6.00 ea	31.00 /mh	372	1,580.00 /ea	9,480	-	-	-	-	-	-	9,852	10,001
	Valve Plug Flange 125# 4in	15110.650	6.00 ea	31.00 /mh	372	1,200.00 /ea	7,200	-	-	-	-	-	-	7,572	7,721
	Valve Plug Flange 125# 10in	15110.650	2.00 ea	31.00 /mh	248	2,790.00 /ea	5,580	-	-	-	-	-	-	5,828	5,927
	PS Clevis Hanger HDG 4in	15060.098	3.00 ea	31.00 /mh	93	10.00 /ea	30	-	-	-	-	-	-	123	160
	PS Clevis Hanger HDG 10in	15060.098	10.00 ea	31.00 /mh	310	46.00 /ea	460	-	-	-	-	-	-	770	894
	NBG Kit 125# Steel 4in	15125.010	48.00 ea	31.00 /mh	744	25.00 /ea	1,200	-	-	-	-	-	-	1,944	2,242
	NBG Kit 125# Steel 10in	15125.010	28.00 ea	31.00 /mh	868	90.00 /ea	2,520	-	-	-	-	-	-	3,388	3,735
	DI MEGAFLANGE w/ Galv Bolts for DIP 4"	15112.220	2.00 ea	31.00 /mh	93	92.00 /ea	184	-	-	-	-	-	-	277	314
	DI MEGAFLANGE w/ Galv Bolts for DIP 10"	15112.220	4.00 ea	31.00 /mh	372	300.00 /ea	1,200	-	-	-	-	-	-	1,572	1,721
	DI Blind Flange 10"	15221.405	2.00 ea	31.00 /mh	93	350.00 /ea	700	-	-	-	-	-	-	793	830
	PS Expansion Anchor 5/8 x 8-1/2in SS	15060.127	52.00 ea	31.00 /mh	161	17.00 /ea	884	-	-	-	-	-	-	1,045	1,110
	Link Seal Size LS-340-S	15123.100	48.00 ea	31.00 /mh	223	15.00 /ea	720	-	-	-	-	-	-	943	1,032
	PS Ceiling Plate For 5/8" Rod EG	15060.093	13.00 ea	31.00 /mh	355	30.00 /ea	390	-	-	-	-	-	-	745	887
	DI MEGALUG for DIP 10"	2511.610	1.00 ea	31.00 /mh	16	66.00 /ea	66	-	-	-	-	-	-	82	88
	NBG Kit 125# Insulating 4in	15125.016	8.00 ea	31.00 /mh	248	40.00 /ea	320	-	-	-	-	-	-	568	667
	10" RAS Discharge				7,544		70,994							78,538	81,555
	GEN General				29,177		239,173							268,350	280,021
	850 Existing RAS/WAS				29,177		239,173							268,350	280,021
	402700 Process Pipe - General				820,135		4,523,555		86,610		422,300		140,624	5,993,225	6,329,724
409000 Instrumentation and Control for Process Systems															
150 Influent Pump Station															
Instruments															
16-01 IPS Float Switch Penetrations 150-LSHH															
	DI Wall Pipe FLG x PE w/ Collar 8in x 1ft 6in long	15221.336	3.00 ea	31.00 /mh	186	900.00 /ea	2,700	-	-	-	-	-	-	2,886	2,960
	DI Blind Flange 8"	15221.405	3.00 ea	31.00 /mh	186	200.00 /ea	600	-	-	-	-	-	-	786	860
	NBG Kit 125# HDG 8in	15125.014	3.00 ea	31.00 /mh	28	40.00 /ea	120	-	-	-	-	-	-	148	159
	IPS Float Switch Penetrations 150-LSHH				400		3,420	/lf						3,820	3,980
	Instruments				400		3,420							3,820	3,980
	150 Influent Pump Station				400		3,420	/LS						3,820	3,980
350 Step Feed Process Building															
Instruments															
16-01 Instuments Level Floats															
	DI Wall Pipe FLG x PE w/ Collar 8in x 1ft 6in long	15221.336	2.00 ea	31.00 /mh	124	900.00 /ea	1,800	-	-	-	-	-	-	1,924	1,974
	DI Blind Flange 8"	15221.405	2.00 ea	31.00 /mh	124	200.00 /ea	400	-	-	-	-	-	-	524	574
	NBG Kit 125# HDG 8in	15125.014	2.00 ea	31.00 /mh	19	40.00 /ea	80	-	-	-	-	-	-	99	106
	Instuments Level Floats				267		2,280	/lf						2,547	2,653
	Instruments				267		2,280							2,547	2,653
	350 Step Feed Process Building				267		2,280	/LS						2,547	2,653
	409000 Instrumentation and Control for Process Systems				667		5,700							6,367	6,633
412213 Overhead Cranes															
001 General															
Hoists															
14 -100 Conveying Systems - Sub															
	Sub - Hoists & Cranes	14600.100	1.00 ls	-	-	-	-	269,000.00 /ls	269,000	-	-	-	-	269,000	269,000
	Sub - material escalation	14600.100	1.00 ls	-	-	-	-	26,900.00 /ls	26,900	-	-	-	-	26,900	26,900
	Conveying Systems - Sub		1.00 LS					295,900.00 /LS	295,900					295,900	295,900
	Hoists								295,900					295,900	295,900
	001 General							/LS	295,900					295,900	295,900
350 Step Feed Process Building															
Hoists															
14 -100 Screw Press Bridge Crane															
	Bridge Crane - 2 TON - Electric	14600.100	1.00 ea	31.00 /mh	1,240	-	-			-	-	-	-	1,240	1,736
	Cast in Place anchors 4 ea	5001.050	4.00 ea	31.00 /mh	992	100.00 /ea	400	-	-	-	-	-	-	1,392	1,789
	Screw Press Bridge Crane		1.00 LS		2,232		400	/LS						2,632	3,525
	Hoists				2,232		400							2,632	3,525
	350 Step Feed Process Building				2,232		400	/LS						2,632	3,525
550 UV and Digester Blower Building															
Hoists															
14 -100 UV Workstation Crane															
	Bridge Crane - 2 Ton - Manual	14600.100	1.00 ea	31.00 /mh		-	-			-	-	-	-		

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
14	-100 UV Workstation Crane														
	Set Anchor Bolts 4 Set	3150.700	4.00 ea	31.00 /mh	992	100.00 /ea	400	-	-	-	-	-	-	1,392	1,789
	UV Workstation Crane		1.00 LS		992		400	/LS						1,392	1,789
	Hoists				992		400							1,392	1,789
	550 UV and Digester Blower Building				992		400	/LS						1,392	1,789
	412213 Overhead Cranes				3,224		800		295,900					299,924	301,214
412223	Monorail Hoists														
	150 Influent Pump Station														
	Hoists														
14	-100 Influent Pump Station Bridge Crane														
	Bridge Crane - 1 TON - Manual	14600.100	1.00 ea	31.00 /mh	1,240	-	-			-	-	-	-	1,240	1,736
	Set Anchor Bolts 4 Set	3150.700	8.00 ea	31.00 /mh	1,984	100.00 /ea	800	-	-	-	-	-	-	2,784	3,578
	Influent Pump Station Bridge Crane		1.00 LS		3,224		800	/LS						4,024	5,314
	Hoists				3,224		800							4,024	5,314
	150 Influent Pump Station				3,224		800	/LS						4,024	5,314
	200 Aeration Basin														
	General														
14-01	Davit Cranes at Aeration														
	Sub - Hoists & Cranes	14600.100	1.00 ls	-	-	-	-			-	-	-	-		
	Bases	14600.100	2.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	3/4" epoxy anchors	5001.052	8.00 ea	31.00 /mh	248	20.00 /ea	160	-	-	-	-	-	-	408	507
	Davit Cranes at Aeration		2.00 EA		744		160	/EA						904	1,202
	General				744		160							904	1,202
	200 Aeration Basin				744		160	/LS						904	1,202
	350 Step Feed Process Building														
	Hoists														
14	-100 Step Feed Lower Level Pump Room														
	Monorail Hoist - 1 Ton - Manual	14600.100	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Epoxy Anchor 7/8 x 18" A307 - Plate to Concrete	5001.051	4.00 ea	31.00 /mh	992	100.00 /ea	400	-	-	-	-	-	-	1,392	1,789
	Epoxy Anchor 3/4 x 4-1/4in A325 Plate to Beam	5001.051	4.00 ea	31.00 /mh	992	100.00 /ea	400	-	-	-	-	-	-	1,392	1,789
	Steel Plate 3/8"x3.25"x3.5" Washers	5124.005	4.00 ea	31.00 /mh		0.01 /lb	1	-	-	-	-	-	-	1	1
						s									
	Steel Plate 1/4"x6.5"x14"	5124.005	2.00 ea	31.00 /mh		0.01 /lb	0	-	-	-	-	-	-	0	0
						s									
	Spacer Pack 3/4"x3.5"x5"	5124.005	8.00 ea	31.00 /mh		0.01 /lb	2	-	-	-	-	-	-	2	2
						s									
	Field Welding - Carbon Steel	5000.985	8.00 hrs	31.00 /mh	248	/hr		142.30 /hrs	1,138	/hrs		-	-	1,386	1,486
						s									
	Steel Plate 1"x6"x15" - Main Plate	5124.010	2.00 ea	31.00 /mh		0.01 /lb	1	-	-	-	-	-	-	1	1
						s									
	Steel Plate 3/4"x12"x6"?? - Side Anchor Plate	5124.005	2.00 ea	31.00 /mh		0.01 /lb	1	-	-	-	-	-	-	1	1
						s									
	Anchor Bolt 3/4x6 SS 316	5001.064	4.00 ea	31.00 /mh		5.00 /ea	20	-	-	-	-	-	-	20	20
	Anchor Bolt 3/4x? A325N Bolts	5001.064	6.00 ea	31.00 /mh		5.00 /ea	30	-	-	-	-	-	-	30	30
	Monorail Beam - W - 10x30, 47' Long	5001.150	1.00 ea	31.00 /mh		0.00 /ea	0	-	-	-	-	-	-		
	Step Feed Lower Level Pump Room		1.00 LS		2,728		855	1,138.42 /LS	1,138					4,721	5,812
14	-100 Step Feed Polymer Room														
	Monorail - 2 Ton - Manual	14600.100	1.00 ea	31.00 /mh	744	0.00 /ea	0	-	-	-	-	-	-	744	1,042
	Set Anchor Bolts 4 Set	3150.700	4.00 ea	31.00 /mh	992	100.00 /ea	400	-	-	-	-	-	-	1,392	1,789
	Step Feed Polymer Room		1.00 LS		1,736		400	/LS						2,136	2,830
14	-100 Step Feed Bower Room														
	Davit Crane - 1/2 Ton	14600.100	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Davit Base	14600.100	1.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Anchors for Davit Bases	5001.150	4.00 ea	31.00 /mh	31	20.00 /ea	80	-	-	-	-	-	-	111	123
	Step Feed Bower Room		1.00 LS		651		80	/LS						731	991
	Hoists				5,115		1,335		1,138					7,588	9,634
	350 Step Feed Process Building				5,115		1,335	/LS	1,138					7,588	9,634
	550 UV and Digester Blower Building														
	Hoists														
14	-100 1 Ton Davit Crane														
	Davit Crane - 1/2 Ton	14600.100	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Davit Base	14600.100	1.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Anchors for Davit Bases	5001.150	4.00 ea	31.00 /mh	31	20.00 /ea	80	-	-	-	-	-	-	111	123
	1 Ton Davit Crane		1.00 LS		651		80	/LS						731	991
	Hoists				651		80							731	991
	550 UV and Digester Blower Building				651		80	/LS						731	991
	600 Aerobic Digester 5 and 6														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
Hoists															
14	-100 1/2 Ton Davit Crane														
	Davit Crane - 1/2 Ton	14600.100	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Davit Base	14600.100	2.00 ea	31.00 /mh	248	/ea		-	-	-	-	-	-	248	347
	Anchors for Davit Bases	5001.150	8.00 ea	31.00 /mh	62	20.00 /ea	160	-	-	-	-	-	-	222	247
	1/2 Ton Davit Crane		1.00 LS		806		160	/LS						966	1,288
Hoists					806		160							966	1,288
600 Aerobic Digester 5 and 6					806		160	/LS						966	1,288
650 Existing Digester 1 to 4															
Hoists															
14	-100 1/2 Ton Davit Crane														
	Davit Crane - 1/2 Ton	14600.100	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Davit Base	14600.100	4.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Anchors for Davit Bases	5001.150	16.00 ea	31.00 /mh	124	20.00 /ea	320	-	-	-	-	-	-	444	494
	1/2 Ton Davit Crane		1.00 LS		1,116		320	/LS						1,436	1,882
Hoists					1,116		320							1,436	1,882
650 Existing Digester 1 to 4					1,116		320	/LS						1,436	1,882
412223 Monorail Hoists					11,656		2,855		1,138					15,649	20,312
444219 Blowers															
001 General															
General															
01	-100 Div 44 Misc Equipment and general														
	Mechanical Foreman	1000.100	8.00 wk	1,500.00 /wk	12,000	-	-	-	-	-	-	-	-	12,000	16,800
	Pickup	1900.210	3.00 mnth	-	-	-	-	-	-	836.00 /mnth	2,508	514.00 /mnth	1,542	4,050	4,100
	Grove RT760/RT700, 60 ton (240 HP) (L)	1900.100	4.00 mnth	7,296.00 /mnth	29,184	350.00 /mnth	1,400	-	-	9,500.00 /mnth	38,000	1,500.00 /mnth	6,000	74,584	87,018
	Scissor Lifts	11900.028	2.00 mo	31.00 /mh	744	2,800.00 /mo	5,600	-	-	-	-	-	-	6,344	6,642
	Forklift small propane	2322.510	2.00 mnth	-	-	-	-	-	-	2,500.00 /mnth	5,000	-	-	5,000	5,100
	Equipment Connex (spare Parts Equip Storage)	1900.142	27.00 mnth	-	-	-	-	-	-	150.00 /mnth	4,050	0.00 /mnth	0	4,050	4,131
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	6.00 mnth	-	-	-	-	-	-	3,500.00 /mnth	21,000	1,200.00 /mnth	7,200	28,200	28,620
	Div 44 Misc Equipment and general				41,928		7,000	/wk			70,558		14,742	134,228	152,410
General					41,928		7,000				70,558		14,742	134,228	152,410
001 General					41,928		7,000	/LS			70,558		14,742	134,228	152,410
350 Step Feed Process Building															
GEN General															
11	-09 Step Feed Blowers														
	Supply Blower Package (In with Nurose)	11100.045	1.00 ea	-	-	355,185.00 /hp	355,185	-	-	-	-	-	-	355,185	355,185
	Control Panel	11100.020	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Blower Misc -	11100.020	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Blower Inlet Filter	11100.010	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Blwr Init Disch Silncr	11100.050	1.00 ea	31.00 /mh	744	/ea		-	-	-	-	-	-	744	1,042
	Anchors for Equipment	11000.005	36.00 ea	31.00 /mh	279	50.00 /ea	1,800	-	-	-	-	-	-	2,079	2,191
	Misc Materials	11000.005	3.00 ea	31.00 /mh	93	850.00 /ea	2,550	-	-	-	-	-	-	2,643	2,680
	Start up and Training	11000.005	1.00 ls	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Turbo Blower 100 hp	11100.045	1.00 ea	31.00 /mh	1,488	/hp		-	-	-	-	-	-	1,488	2,083
	Turbo Blower 150hp	11100.045	2.00 ea	31.00 /mh	2,976	/hp		-	-	-	-	-	-	2,976	4,166
	Step Feed Blowers				7,347		359,535	/LS						366,882	369,821
GEN General					7,347		359,535							366,882	369,821
350 Step Feed Process Building					7,347		359,535	/LS						366,882	369,821
550 UV and Digester Blower Building															
GEN General															
11	-09 Digester Blowers														
	Supply Blower Package (Aerzen)	11100.045	1.00 ea	-	-	207,753.00 /hp	207,753	-	-	-	-	-	-	207,753	207,753
	Control Panel	11100.020	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Blower Inlet Filter 12"	11100.010	1.00 ea	31.00 /mh	744	4,825.00 /ea	4,825	-	-	-	-	-	-	5,569	5,867
	Blwr Init Disch Silncr 12"	11100.050	1.00 ea	31.00 /mh	372	/ea		-	-	-	-	-	-	372	521
	Anchors for Equipment	11000.005	30.00 ea	31.00 /mh	233	50.00 /ea	1,500	-	-	-	-	-	-	1,733	1,825
	Misc Materials	11000.005	5.00 ea	31.00 /mh	155	250.00 /ea	1,250	-	-	-	-	-	-	1,405	1,467
	Start up and Training	11000.005	1.00 ls	31.00 /mh	1,240	-	-	-	-	-	-	-	-	1,240	1,736
	Pos. Displacement Blower 75 hp	11100.030	3.00 ea	31.00 /mh	2,976	/hp		-	-	-	-	-	-	2,976	4,166
	Pos. Displacement Blower 100 hp	11100.030	2.00 ea	31.00 /mh	1,984	/hp		-	-	-	-	-	-	1,984	2,778
	Digester Blowers				8,200		215,328	/LS						223,528	226,807
GEN General					8,200		215,328							223,528	226,807
550 UV and Digester Blower Building					8,200		215,328	/LS						223,528	226,807

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	444219 Blowers				57,475		581,863				70,558		14,742	724,638	749,038
	444224 Secondary Clarifier Mechanism														
	300 Secondary Clarifiers 5 and 6														
	GEN General														
	11-21 Clarifier Equipment 2 ea 5 and 6														
	Clarifier Package Supply (Galv)	11000.100	1.00 ls	-	-	291,714.00 /ea	291,714	-	-	-	-	-	-	291,714	291,714
	Clarifier Welding	11000.100	1.00 ls	31.00 /mh	496	/ls				-	-	-	-	496	694
	Center Column Anchors	11000.100	20.00 ea	31.00 /mh	930	/ea		-	-	-	-	-	-	930	1,302
	Clarifier Control Panel	11000.100	2.00 ea	31.00 /mh	992	/ea		-	-	-	-	-	-	992	1,389
	Clarifier Install	11000.100	2.00 ea	31.00 /mh	29,760	-	-			-	-	-	-	29,760	41,664
	Misc Materials and caulking	11000.005	1.00 ea	31.00 /mh	31	1,500.00 /ea	1,500	-	-	-	-	-	-	1,531	1,543
	Grout Equipment	11000.005	16.00 cf	31.00 /mh	1,984	60.00 /cf	960	-	-	-	-	-	-	2,944	3,738
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Supply Weir and Baffle Package	11000.460	1.00 ls	-	-	33,350.00 /ls	33,350	-	-	-	-	-	-	33,350	33,350
	Install Weirs	11000.460	282.00 lf	31.00 /mh	7,431	-	-	-	-	-	-	-	-	7,431	10,403
	Install Baffles	11000.460	282.00 lf	31.00 /mh	7,431	-	-	-	-	-	-	-	-	7,431	10,403
	Final Level and Adjust Weirs	11000.460	2.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Clarifier Torque Test	11000.100	2.00 EA	31.00 /mh	1,488	500.00 /E A	1,000			-	-	-	-	2,488	3,083
	Field Welding - Carbon Steel	5000.985	16.00 hrs	31.00 /mh	496	/hr s		110.00 /hrs	1,760	/hrs		-	-	2,256	2,454
	Painting Sub touch up clarifiers 2 ea	9910.100	1.00 ls	-	-	-	-	16,000.00 /ls	16,000	-	-	-	-	16,000	16,000
	Clarifier Equipment 2 ea 5 and 6				52,030		328,524	/ls	17,760					398,314	419,127
	GEN General				52,030		328,524		17,760					398,314	419,127
	300 Secondary Clarifiers 5 and 6				52,030		328,524	/LS	17,760					398,314	419,127
	444224 Secondary Clarifier Mechanism				52,030		328,524		17,760					398,314	419,127
	444225 Secondary Clarifier Launder Cover														
	300 Secondary Clarifiers 5 and 6														
	GEN General														
	11-21 Clarifier Launder Covers for 1-6														
	Clarifier Misc Materials	11000.100	6.00 ea	31.00 /mh	1,488	500.00 /ea	3,000			-	-	-	-	4,488	5,083
	Clarifier Launder Covers	11000.100	6.00 ea	31.00 /mh	59,520	19,166.67 /ea	115,000			-	-	-	-	174,520	198,328
	Clarifier Launder Covers for 1-6				61,008		118,000	/ls						179,008	203,411
	GEN General				61,008		118,000							179,008	203,411
	300 Secondary Clarifiers 5 and 6				61,008		118,000	/LS						179,008	203,411
	444225 Secondary Clarifier Launder Cover				61,008		118,000							179,008	203,411
	444228 Weir and Baffle Plates														
	550 UV and Digester Blower Building														
	GEN General														
	11-500 Finger Weirs														
	Anchors for Equipment	11000.005	1.00 ls	31.00 /mh	8	250.00 /ls	250	-	-	-	-	-	-	258	261
	Install Weirs	11000.460	1.00 ls	31.00 /mh	11	-	-	-	-	-	-	-	-	11	15
	Final Level and Adjust Weirs	11000.460	1.00 ea	31.00 /mh	2,232	-	-	-	-	-	-	-	-	2,232	3,125
	Supply Finger Weir Package In UV Package	11000.460	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Non Shrink Grout	3150.700	6.00 cf	31.00 /mh	186	60.00 /cf	360	-	-	-	-	-	-	546	620
	Finger Weirs				2,437		610	/ls						3,047	4,021
	GEN General				2,437		610							3,047	4,021
	550 UV and Digester Blower Building				2,437		610	/LS						3,047	4,021
	444228 Weir and Baffle Plates				2,437		610							3,047	4,021
	444230 Floating Decanters														
	600 Aerobic Digester 5 and 6														
	GEN General														
	11-500 Floating Decanter														
	Anchors for Equipment	11000.005	24.00 ea	31.00 /mh	186	25.00 /ea	600	-	-	-	-	-	-	786	860
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Start up and Training	11000.005	1.00 ls	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Decanter Supply	11000.440	1.00 ls	-	-	42,703.00 /ls	42,703	-	-	-	-	-	-	42,703	42,703
	Decanter Install	11000.440	1.00 ea	31.00 /mh	992	/ls		-	-	-	-	-	-	992	1,389
	Floating Decanter				1,488		43,423	/ls						44,911	45,506
	GEN General				1,488		43,423							44,911	45,506
	600 Aerobic Digester 5 and 6				1,488		43,423	/LS						44,911	45,506
	650 Existing Digester 1 to 4														
	GEN General														
	11-500 Floating Decanter														
	Anchors for Equipment	11000.005	24.00 ea	31.00 /mh	186	25.00 /ea	600	-	-	-	-	-	-	786	860
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11	500 Floating Decanter														
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Start up and Training	11000.005	1.00 ls	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Decanter Supply in with 1-4 decanter	11000.440	1.00 ls	-	-	/ls		-	-	-	-	-	-		
	Decanter Install	11000.440	1.00 ea	31.00 /mh	992	/ls		-	-	-	-	-	-	992	1,389
	Floating Decanter				1,519		720	/ls						2,239	2,847
	GEN General				1,519		720							2,239	2,847
	650 Existing Digester 1 to 4				1,519		720	/LS						2,239	2,847
	444230 Floating Decanters				3,007		44,143							47,150	48,353
444235	Single Entry Drum Screen and Screenings Washer Compactor														
	100 Headworks														
	GEN General														
11	500 Drum Screen and Washer Compactor														
	Anchors for Equipment	11000.005	64.00 ea	31.00 /mh	496	25.00 /ea	1,600	-	-	-	-	-	-	2,096	2,294
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	500.00 /ea	500	-	-	-	-	-	-	531	543
	Spare Parts	11000.005	1.00 ls	31.00 /mh		/ls		-	-	-	-	-	-		
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Screenings Compactor	11000.320	2.00 ea	31.00 /mh	6,200	/ea		-	-	-	-	-	-	6,200	8,680
	Rotary Screen	11000.320	2.00 ea	31.00 /mh	18,600	/ea		-	-	-	-	-	-	18,600	26,040
	Compactor Discharge Pipe and Supports	11000.320	2.00 ea	31.00 /mh	1,488	1,500.00 /ea	3,000	-	-	-	-	-	-	4,488	5,083
	Instrument - Level - Ultrasonic Sensor - (upstream, dstream)	17300.000	5.00 ea	31.00 /mh	310	500.00 /ea	2,500	-	-	-	-	-	-	2,810	2,934
	Instrument - Level - Float Switch (upstream)	17300.000	3.00 ea	31.00 /mh	186	500.00 /ea	1,500	-	-	-	-	-	-	1,686	1,760
	Rotary Screen and Washer Compactor Supply	11000.320	1.00 ls	31.00 /mh		632,000.00 /ls	632,000	-	-	-	-	-	-	632,000	632,000
	Chutes Stainless	14560.100	2.00 ea	31.00 /mh		-	-			-	-	-	-		
	Drum Screen and Washer Compactor		1.00 ls		27,807		641,100	/ls						668,907	680,030
	GEN General				27,807		641,100							668,907	680,030
	100 Headworks				27,807		641,100	/LS						668,907	680,030
	444235 Single Entry Drum Screen and Screenings Washer Compactor				27,807		641,100							668,907	680,030
444240	Vortex Grit Chamber Equipment														
	100 Headworks														
	GEN General														
11	500 Grit Vortex Equipment														
	Anchors for Equipment	11000.005	10.00 ea	31.00 /mh	78	25.00 /ea	250	-	-	-	-	-	-	328	359
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	500.00 /ea	500	-	-	-	-	-	-	531	543
	Spare Parts	11000.005	1.00 ls	31.00 /mh		/ls		-	-	-	-	-	-		
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Vortex Grit Equipment includes Classifier	11600.020	1.00 ea	31.00 /mh	3,968	240,776.00 /ea	240,776	-	-	-	-	-	-	244,744	246,331
	Grit Vortex Equipment				4,759		241,646	/ls						246,405	248,308
	GEN General				4,759		241,646							246,405	248,308
	100 Headworks				4,759		241,646	/LS						246,405	248,308
	444240 Vortex Grit Chamber Equipment				4,759		241,646							246,405	248,308
444241	Separator and Grit Washer/Classifier														
	100 Headworks														
	GEN General														
11	500 Grit Classifier														
	Anchors for Equipment	11000.005	16.00 ea	31.00 /mh	124	25.00 /ea	400	-	-	-	-	-	-	524	574
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	500.00 /ea	500	-	-	-	-	-	-	531	543
	Control Panel	11000.005	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Misc Rotometers etc	11000.005	1.00 ls	31.00 /mh	124	1,500.00 /ls	1,500	-	-	-	-	-	-	1,624	1,674
	Chutes Stainless	14560.100	1.00 ea	31.00 /mh	744	-	-			-	-	-	-	744	1,042
	Cyclone Grit Separator	11600.020	1.00 ea	31.00 /mh	1,984	/ea		-	-	-	-	-	-	1,984	2,778
	Package Air Compressor 100 cfm	11300.030	1.00 ea	31.00 /mh	992	/ea		-	-	-	-	-	-	992	1,389
	Grit Classifier				4,681		2,520	/ls						7,201	9,073
	GEN General				4,681		2,520							7,201	9,073
	100 Headworks				4,681		2,520	/LS						7,201	9,073
	444241 Separator and Grit Washer/Classifier				4,681		2,520							7,201	9,073
444248	Automatic Composite Sampler														
	100 Headworks														
	GEN General														
11	500 Auto Composite Sampler														
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11	-500 Auto Composite Sampler														
	Start up and Training	11000.005	1.00 ls	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Auto Composite Sampler	11000.335	1.00 ea	31.00 /mh	496	8,386.00 /ea	8,386	-	-	-	-	-	-	8,882	9,080
	Auto Composite Sampler				713		8,836	/ls						9,549	9,834
	GEN General				713		8,836							9,549	9,834
	100 Headworks				713		8,836	/LS						9,549	9,834
550 UV	and Digester Blower Building														
GEN	General														
11	-500 Auto Composite Sampler														
	Anchors for Equipment	11000.005	4.00 ea	31.00 /mh	31	25.00 /ea	100	-	-	-	-	-	-	131	143
	Grout Equipment	11000.005	1.00 cf	31.00 /mh	93	60.00 /cf	60	-	-	-	-	-	-	153	190
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293
	Start up and Training	11000.005	1.00 ls	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Auto Composite Sampler Relocated	11000.335	1.00 ea	31.00 /mh	496	0.00 /ea	0	-	-	-	-	-	-	496	694
	Auto Composite Sampler				806		410	/ls						1,216	1,538
	GEN General				806		410							1,216	1,538
	550 UV and Digester Blower Building				806		410	/LS						1,216	1,538
	444248 Automatic Composite Sampler				1,519		9,246							10,765	11,373
444256	Pumps														
100	Headworks														
GEN	General														
11	-01 Grit Pumps														
	Supply Pump Package Wemco	11700.020	1.00 ls	-	-	60,929.00 /ls	60,929	-	-	-	-	-	-	60,929	60,929
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	248	60.00 /cf	120	-	-	-	-	-	-	368	467
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293
	Pressure Gauge Assembly	11000.005	2.00 ea	31.00 /mh	248	1,200.00 /ea	2,400	-	-	-	-	-	-	2,648	2,747
	Start up and Training	11000.005	1.00 ls	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Horz Non Clog Centr Pump - 15 HP	11700.020	2.00 ea	31.00 /mh	1,488	/ea		-	-	-	-	-	-	1,488	2,083
	Grit Pumps				2,325		63,899							66,224	67,154
	GEN General				2,325		63,899							66,224	67,154
	100 Headworks				2,325		63,899	/LS						66,224	67,154
150	Influent Pump Station														
GEN	General														
11	-02 Influent Submersible Pumps														
	Supply Submersible Pumps flyght	11700.110	1.00 ls	-	-	99,340.00 /ls	99,340	-	-	-	-	-	-	99,340	99,340
	Submersible Pump - 20 HP	11700.110	4.00 ea	31.00 /mh	3,968	/ls		-	-	-	-	-	-	3,968	5,555
	Control Panel	11700.110	1.00 ls	31.00 /mh	248	/ls		-	-	-	-	-	-	248	347
	Level Controls	11700.110	4.00 ls	31.00 /mh	124	150.00 /ls	600	-	-	-	-	-	-	724	774
	Mounting Brackets	11700.110	8.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Lifting Chain	11700.110	120.00 lf	31.00 /mh	372	/lf		-	-	-	-	-	-	372	521
	Misc Materials	11000.005	1.00 ls	31.00 /mh	31	250.00 /ls	250	-	-	-	-	-	-	281	293
	Anchors for Equipment	11000.005	40.00 ea	31.00 /mh	310	25.00 /ea	1,000	-	-	-	-	-	-	1,310	1,434
	Grout Equipment	11000.005	3.00 cf	31.00 /mh	372	60.00 /cf	180	-	-	-	-	-	-	552	701
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Influent Submersible Pumps		4.00 ls		6,045		101,370	/ls						107,415	109,833
	GEN General				6,045		101,370							107,415	109,833
	150 Influent Pump Station				6,045		101,370	/LS						107,415	109,833
200	Aeration Basin														
GEN	General														
11	-02 MLR Pumps														
	Supply Submersible Pumps (flyght)	11700.110	1.00 ls	-	-	48,853.00 /ls	48,853	-	-	-	-	-	-	48,853	48,853
	Submersible Pump - 7.5 HP	11700.110	2.00 ea	31.00 /mh	1,488	/ea		-	-	-	-	-	-	1,488	2,083
	Control Panel	11700.110	1.00 ls	31.00 /mh	248	/ls		-	-	-	-	-	-	248	347
	Mounting Brackets	11700.110	4.00 ea	31.00 /mh	62	/ea		-	-	-	-	-	-	62	87
	Lifting Chain	11700.110	50.00 lf	31.00 /mh	155	/lf		-	-	-	-	-	-	155	217
	Misc Materials	11000.005	2.00 ea	31.00 /mh	62	250.00 /ea	500	-	-	-	-	-	-	562	587
	Anchors for Equipment	11000.005	24.00 ea	31.00 /mh	186	25.00 /ea	600	-	-	-	-	-	-	786	860
	Grout Equipment	11000.005	1.50 cf	31.00 /mh	186	60.00 /cf	90	-	-	-	-	-	-	276	350
	Start up and Training	11000.005	4.00 ls	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	MLR Pumps		2.00 ls		4,371		50,043	/ls						54,414	56,162
	GEN General				4,371		50,043							54,414	56,162
	200 Aeration Basin				4,371		50,043	/LS						54,414	56,162
350	Step Feed Process Building														
GEN	General														
11	-01 RAS Pumps														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11	-01 RAS Pumps														
	Supply RAS Pump Package (Hayward Gordon)	11700.020	1.00 ls	-	-	85,093.00 /ls	85,093	-	-	-	-	-	-	85,093	85,093
	Anchors for Equipment	11000.005	12.00 ea	31.00 /mh	93	25.00 /ea	300	-	-	-	-	-	-	393	430
	Grout Equipment	11000.005	4.50 cf	31.00 /mh	558	60.00 /cf	270	-	-	-	-	-	-	828	1,051
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293
	Pressure Gauge Assembly	11000.005	3.00 ea	31.00 /mh	372	1,200.00 /ea	3,600	-	-	-	-	-	-	3,972	4,121
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Screw Flow Centr Pump - 15 HP	11700.020	3.00 ea	31.00 /mh	2,976	/ea		-	-	-	-	-	-	2,976	4,166
	RAS Pumps				4,526		89,513							94,039	95,849
11	-01 WAS & SCUM Pumps														
	Supply Pump Package (Borger)	11700.020	1.00 ls	-	-	73,203.00 /ls	73,203	-	-	-	-	-	-	73,203	73,203
	Anchors for Equipment	11000.005	12.00 ea	31.00 /mh	93	25.00 /ea	300	-	-	-	-	-	-	393	430
	Grout Equipment	11000.005	3.00 cf	31.00 /mh	372	60.00 /cf	180	-	-	-	-	-	-	552	701
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Pressure Gauge Assembly	11000.005	3.00 ea	31.00 /mh	372	1,200.00 /ea	3,600	-	-	-	-	-	-	3,972	4,121
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Lobe Pumps - 3 HP -	11700.050	3.00 ea	31.00 /mh	2,232	/ea		-	-	-	-	-	-	2,232	3,125
	WAS & SCUM Pumps				3,596		77,283							80,879	82,317
11	-02 Sump Pumps														
	Supply Submersible Pumps (flyght)	11700.110	1.00 ls	-	-	14,776.00 /ls	14,776	-	-	-	-	-	-	14,776	14,776
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Sump Pumps .5 hp	11700.090	2.00 ea	31.00 /mh	1,488	/ea		-	-	-	-	-	-	1,488	2,083
	Sump Pumps				2,077		15,226	/ls						17,303	18,134
11	-03 Sodium Hypo Feed Pump Skid														
	Start up and Training	11000.005	1.00 mnhr	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	750.00 /ea	750	-	-	-	-	-	-	781	793
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Startup Chemicals -	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Control Panel	11000.005	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Tote Containment	11000.005	1.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Sodium Hypochlorite Chem Feed System Skid	11200.020	1.00 ea	31.00 /mh	744	46,550.00 /ea	46,550	-	-	-	-	-	-	47,294	47,592
	Sodium Hypo Feed Pump Skid				1,829		47,620	/LS						49,449	50,181
11	-03 Feric Chloride Pump Skid														
	FC Feed Skid	11200.020	1.00 ea	31.00 /mh	744	/ea		-	-	-	-	-	-	744	1,042
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	750.00 /ea	750	-	-	-	-	-	-	781	793
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	248	60.00 /cf	120	-	-	-	-	-	-	368	467
	Control Panel	11000.005	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Tote Containment	11000.005	1.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Feric Chloride Pump Skid				1,736		1,070	/LS						2,806	3,500
11	-03 Glycerin Feed Skid														
	Gly Feed Skid	11200.020	1.00 ea	31.00 /mh	744	/ea		-	-	-	-	-	-	744	1,042
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	750.00 /ea	750	-	-	-	-	-	-	781	793
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Control Panel	11000.005	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Tote Containment	11000.005	1.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Glycerin Feed Skid				1,674		1,070	/LS						2,744	3,414
	GEN General				15,438		231,782							247,220	253,395
	350 Step Feed Process Building				15,438		231,782	/LS						247,220	253,395
400	Orbal Anaerobic Reactor														
	GEN General														
11	-02 Replacement of Existing MLR														
	Supply Submersible Pumps relocated	11700.110	1.00 ls	-	-	0.01 /ls	0	-	-	-	-	-	-	0	0
	Submersible Pump - 7.5 HP	11700.110	1.00 ea	31.00 /mh	992	/ea		-	-	-	-	-	-	992	1,389
	Mounting Brackets	11700.110	2.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Lifting Chain	11700.110	15.00 lf	31.00 /mh	47	/lf		-	-	-	-	-	-	47	65
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	750.00 /ea	750	-	-	-	-	-	-	781	793
	Anchors for Equipment	11000.005	10.00 ea	31.00 /mh	78	25.00 /ea	250	-	-	-	-	-	-	328	359
	Grout Equipment	11000.005	0.08 cf	31.00 /mh	8	60.00 /cf	5	-	-	-	-	-	-	13	16
	Start up and Training	11000.005	1.00 mnhr	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Replacement of Existing MLR		1.00 ls		1,434		1,005	/ls						2,439	3,012
	GEN General				1,434		1,005							2,439	3,012

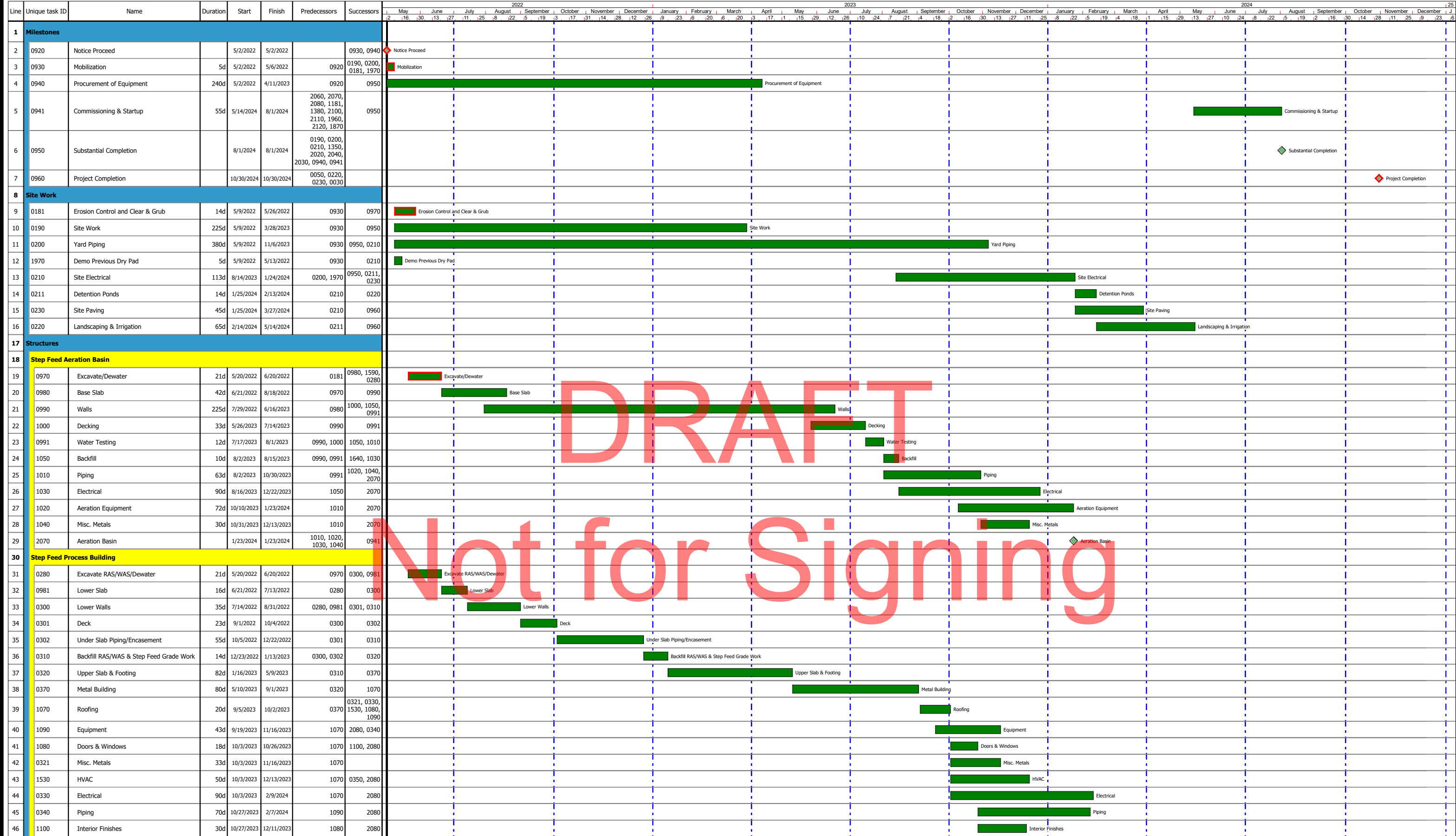
	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	400 Orbal Anaerobic Reactor				1,434		1,005	/LS						2,439	3,012
550 UV	and Digester Blower Building														
GEN	General														
11-01	Screw Press Feed Pumps														
	Supply Pump Package in with WAS scum	11700.020	1.00 ls	-	-	0.00 /ls	0	-	-	-	-	-	-	0	0
	Control Panel	11000.005	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Anchors for Equipment	11000.005	8.00 ea	31.00 /mh	62	25.00 /ea	200	-	-	-	-	-	-	262	287
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	750.00 /ea	750	-	-	-	-	-	-	781	793
	Pressure Gauge Assembly	11000.005	2.00 ea	31.00 /mh	248	1,200.00 /ea	2,400	-	-	-	-	-	-	2,648	2,747
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Lobe Pumps - 7.5 HP -	11700.050	2.00 ea	31.00 /mh	1,488	/ea		-	-	-	-	-	-	1,488	2,083
	Screw Press Feed Pumps				3,007		3,470							6,477	7,680
11-02	NPW Pumps														
	Supply Submersible Pumps (Flyght)	11700.110	1.00 ls	-	-	108,935.00 /ls	108,935	-	-	-	-	-	-	108,935	108,935
	Submersible Pump - 25 HP	11700.110	3.00 ea	31.00 /mh	2,232	/ea		-	-	-	-	-	-	2,232	3,125
	Control Panel	11700.110	1.00 ls	31.00 /mh	496	/ls		-	-	-	-	-	-	496	694
	Misc Materials	11000.005	3.00 ea	31.00 /mh	93	1,000.00 /ea	3,000	-	-	-	-	-	-	3,093	3,130
	Anchors for Equipment	11000.005	36.00 ea	31.00 /mh	279	25.00 /ea	900	-	-	-	-	-	-	1,179	1,291
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Large Filter Included	15112.010	1.00 ea	31.00 /mh	992	0.00 /ea	0	-	-	-	-	-	-	992	1,389
	NPW Pumps		3.00 ls		4,774		112,955	/ls						117,729	119,639
	GEN General				7,781		116,425							124,206	127,318
	550 UV and Digester Blower Building				7,781		116,425	/LS						124,206	127,318
600 Aerobic	Digester 5 and 6														
GEN	General														
11-02	Transfer Pumps														
	Supply Submersible Pumps (Sulzer)	11700.110	2.00 ls	-	-	22,855.00 /ls	45,710	-	-	-	-	-	-	45,710	45,710
	Submersible Pump - 7.5 HP	11700.110	2.00 ea	31.00 /mh	1,488	/ea		-	-	-	-	-	-	1,488	2,083
	Control Panel	11700.110	2.00 ls	31.00 /mh	992	/ls		-	-	-	-	-	-	992	1,389
	Level Controls	11700.110	2.00 ls	31.00 /mh	62	/ls		-	-	-	-	-	-	62	87
	Mounting Brackets	11700.110	4.00 ea	31.00 /mh	62	/ea		-	-	-	-	-	-	62	87
	Lifting Chain	11700.110	50.00 lf	31.00 /mh	155	/lf		-	-	-	-	-	-	155	217
	Misc Materials	11000.005	2.00 ea	31.00 /mh	62	500.00 /ea	1,000	-	-	-	-	-	-	1,062	1,087
	Anchors for Equipment	11000.005	20.00 ea	31.00 /mh	155	25.00 /ea	500	-	-	-	-	-	-	655	717
	Grout Equipment	11000.005	1.00 cf	31.00 /mh	93	60.00 /cf	60	-	-	-	-	-	-	153	190
	Start up and Training	11000.005	2.00 mnhr	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Transfer Pumps		2.00 ls		4,061		47,270	/ls						51,331	52,955
	GEN General				4,061		47,270							51,331	52,955
	600 Aerobic Digester 5 and 6				4,061		47,270	/LS						51,331	52,955
850 Existing	RAS/WAS														
GEN	General														
11-01	WAS/SCUM Pumps														
	Supply Pump Package (Boerger)	11700.020	1.00 ls	-	-	34,931.00 /ls	34,931	-	-	-	-	-	-	34,931	34,931
	Anchors for Equipment	11000.005	12.00 ea	31.00 /mh	93	25.00 /ea	300	-	-	-	-	-	-	393	430
	Grout Equipment	11000.005	2.00 cf	31.00 /mh	186	60.00 /cf	120	-	-	-	-	-	-	306	380
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	500.00 /ea	500	-	-	-	-	-	-	531	543
	Pressure Gauge Assembly	11000.005	3.00 ea	31.00 /mh	372	1,200.00 /ea	3,600	-	-	-	-	-	-	3,972	4,121
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	WAS Lobe Pumps - 3 HP -	11700.050	3.00 ea	31.00 /mh	2,232	/ea		-	-	-	-	-	-	2,232	3,125
	WAS/SCUM Pumps				3,410		39,451							42,861	44,225
11-02	RAS Pumps														
	Supply Submersible Pumps (Sulzer)	11700.110	1.00 ls	-	-	27,988.00 /ls	27,988	-	-	-	-	-	-	27,988	27,988
	Submersible Pump - 3 HP - Dry pit	11700.110	4.00 ea	31.00 /mh	3,968	/ea		-	-	-	-	-	-	3,968	5,555
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	500.00 /ea	500	-	-	-	-	-	-	531	543
	Anchors for Equipment	11000.005	24.00 ea	31.00 /mh	186	25.00 /ea	600	-	-	-	-	-	-	786	860
	Grout Equipment	11000.005	1.33 cf	31.00 /mh	124	60.00 /cf	80	-	-	-	-	-	-	204	254
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Remove and Relocate Equipment - 2 Existing RAS pumps	2220.140	1.00 ls	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	RAS Pumps		4.00 ls		5,797		29,168	/ls						34,965	37,284
	GEN General				9,207		68,619							77,826	81,509
	850 Existing RAS/WAS				9,207		68,619							77,826	81,509
	444256 Pumps				50,662		680,413							731,075	751,339
444463	Polymer Feed System														
350 Step	Feed Process Building														
GEN	General														
11-03	Polymer Feed System														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11-03	Polymer Feed System														
	Polymer Feed Skids Velodyne	11200.020	2.00 ea	31.00 /mh	1,488	58,697.00 /ea	117,394	-	-	-	-	-	-	118,882	119,477
	In-line Polymer Mixer?	11200.020	2.00 ea	31.00 /mh	62	/ea		-	-	-	-	-	-	62	87
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	750.00 /ea	750	-	-	-	-	-	-	781	793
	Anchors for Equipment	11000.005	16.00 ea	31.00 /mh	124	25.00 /ea	400	-	-	-	-	-	-	524	574
	Grout Equipment	11000.005	4.00 cf	31.00 /mh	372	60.00 /cf	240	-	-	-	-	-	-	612	761
	Control Panel	11000.005	1.00 ea	31.00 /mh	248	/ea		-	-	-	-	-	-	248	347
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Tote Containment	11000.005	3.00 ea	31.00 /mh	372	2,000.00 /ea	6,000	-	-	-	-	-	-	6,372	6,521
	Polymer Feed System				3,224		124,784	/LS						128,008	129,298
	GEN General				3,224		124,784							128,008	129,298
	350 Step Feed Process Building				3,224		124,784	/LS						128,008	129,298
	444463 Polymer Feed System				3,224		124,784							128,008	129,298
444473	UV Disinfection System														
550 UV	and Digester Blower Building														
GEN	General														
11-22	UV Disinfection Equipment														
	UV Disinfection Equipment Supply	11000.410	1.00 ls	-	-	323,775.00 /ls	323,775	-	-	-	-	-	-	323,775	323,775
	UV Disinfection Install UV Banks	11000.410	4.00 ea	31.00 /mh	2,976	-	-	-	-	-	-	-	-	2,976	4,166
	UV Disinfection Install System Control Center	11000.410	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	UV Disinfection Install PDC	11000.410	1.00 ea	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	UV Disinfection Install Chem Cleaning Basin	11000.410	1.00 ea	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	UV Disinfection Blower?	11000.410	1.00 ea	31.00 /mh	744	/ls		-	-	-	-	-	-	744	1,042
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	1,500.00 /ea	1,500	-	-	-	-	-	-	1,531	1,543
	Anchors for Equipment	11000.005	36.00 ea	31.00 /mh	279	25.00 /ea	900	-	-	-	-	-	-	1,179	1,291
	Grout Equipment	11000.005	20.00 cf	31.00 /mh	1,240	60.00 /cf	1,200	-	-	-	-	-	-	2,440	2,936
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Parshall Flumes 12"	11000.295	1.00 ea	31.00 /mh	2,232	10,037.00 /ea	10,037	-	-	-	-	-	-	12,269	13,162
	UV Disinfection Equipment				9,982		337,412	/LS						347,394	351,387
	GEN General				9,982		337,412							347,394	351,387
	550 UV and Digester Blower Building				9,982		337,412	/LS						347,394	351,387
	444473 UV Disinfection System				9,982		337,412							347,394	351,387
444516	Diffusers & Mixing System														
200	Aeration Basin														
GEN	General														
11-23	Compressed Gas Mixing System														
	Aeration Equipment Supply compressed gas mixing (Enviromix)	11000.010	1.00 ea	31.00 /mh		185,000.00 /ls	185,000	-	-	-	-	-	-	185,000	185,000
	Diffused Air Drop Pipe	11000.010	6.00 ea	31.00 /mh	2,976	-	-	-	-	-	-	-	-	2,976	4,166
	Diffused Air Drop Pipe Support	11000.010	20.00 ea	31.00 /mh	620	-	-	-	-	-	-	-	-	620	868
	Diffused Air Header	11000.010	6.00 ea	31.00 /mh	1,488	-	-	-	-	-	-	-	-	1,488	2,083
	Diffused Air Lateral Supports	11000.010	40.00 ea	31.00 /mh	1,240	-	-	-	-	-	-	-	-	1,240	1,736
	Nozzles	11000.010	32.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Anchors for Equipment	11000.005	1.00 ls	31.00 /mh	8	250.00 /ls	250	-	-	-	-	-	-	258	261
	Misc Materials	11000.005	1.00 ls	31.00 /mh	31	1,500.00 /ls	1,500	-	-	-	-	-	-	1,531	1,543
	Bubble Test	11000.005	1.00 ea	31.00 /mh	744	250.00 /ea	250	-	-	-	-	-	-	994	1,292
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Control Panel	11000.005	1.00 ea	31.00 /mh	744	/ea		-	-	-	-	-	-	744	1,042
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Compressed Gas Mixing System				9,370		187,000	/LS						196,370	200,118
11-23	Fine Bubble Air Diffuser System														
	Aeration Equipment Supply (EDI)	11000.010	1.00 ea	31.00 /mh	31	75,750.00 /ls	75,750	-	-	-	-	-	-	75,781	75,793
	Diffused Air Drop Pipe	11000.010	9.00 ea	31.00 /mh	4,464	-	-	-	-	-	-	-	-	4,464	6,250
	Diffused Air Drop Pipe Support	11000.010	18.00 ea	31.00 /mh	1,116	-	-	-	-	-	-	-	-	1,116	1,562
	Diffused Air Header	11000.010	9.00 ea	31.00 /mh	4,464	-	-	-	-	-	-	-	-	4,464	6,250
	Diffused Air Header Support	11000.010	34.00 ea	31.00 /mh	2,108	-	-	-	-	-	-	-	-	2,108	2,951
	Diffused Air Laterals	11000.010	86.00 ea	31.00 /mh	31,992	-	-	-	-	-	-	-	-	31,992	44,789
	Diffused Air Lateral Supports	11000.010	774.00 ea	31.00 /mh	23,994	-	-	-	-	-	-	-	-	23,994	33,592
	Diffused Air Diffusers	11000.010	1,548.00 ea	31.00 /mh	7,198	-	-	-	-	-	-	-	-	7,198	10,077
	Anchors for Equipment	11000.005	1.00 ls	31.00 /mh	8	25.00 /ls	25	-	-	-	-	-	-	33	36
	Misc Materials	11000.005	1.00 ls	31.00 /mh	31	1,500.00 /ls	1,500	-	-	-	-	-	-	1,531	1,543
	Bubble Test	11000.005	1.00 ls	31.00 /mh	744	250.00 /ls	250	-	-	-	-	-	-	994	1,292
	Anchors, Epoxy Cover Board	11000.250	1.00 LS	31.00 /mh		2,000.00 /L S	2,000	-	-	-	-	-	-	2,000	2,000
	Fine Bubble Air Diffuser System				76,150		79,525	/LS						155,675	186,135
	GEN General				85,520		266,525							352,045	386,253
	200 Aeration Basin				85,520		266,525	/LS						352,045	386,253
350 Step	Feed Process Building														

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
GEN	General														
11-23	Compressed Gas Compressors and Expansion Tank														
	Anchors for Equipment included in Gas Mix System	11000.005	16.00 ea	31.00 /mh	124	25.00 /ea	400	-	-	-	-	-	-	524	574
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	500.00 /ea	500	-	-	-	-	-	-	531	543
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Package Air Compressor	11300.030	2.00 ea	31.00 /mh	1,984	/ea		-	-	-	-	-	-	1,984	2,778
	Recieveing Tank	11900.048	1.00 ea	31.00 /mh	744	/ea		-	-	-	-	-	-	744	1,042
	Compressed Gas Compressors and Expansion Tank				3,379		900	/LS						4,279	5,631
GEN	General				3,379		900							4,279	5,631
350	Step Feed Process Building				3,379		900	/LS						4,279	5,631
400	Orbal Anaerobic Reactor														
GEN	General														
11-23	Compressed Gas Aeration System														
	Aeration Equipment Supply included in Comp Gas Mix	11000.010	1.00 ea	31.00 /mh	31	/ls		-	-	-	-	-	-	31	43
	Diffused Air Drop Pipe	11000.010	1.00 ea	31.00 /mh	248	-	-	-	-	-	-	-	-	248	347
	Diffused Air Drop Pipe Support	11000.010	2.00 ea	31.00 /mh	124	-	-	-	-	-	-	-	-	124	174
	Diffused Air Laterals	11000.010	4.00 ea	31.00 /mh	744	-	-	-	-	-	-	-	-	744	1,042
	Diffused Air Lateral Supports	11000.010	12.00 ea	31.00 /mh	372	-	-	-	-	-	-	-	-	372	521
	Nozzles	11000.010	10.00 ea	31.00 /mh	155	-	-	-	-	-	-	-	-	155	217
	Anchors for Equipment	11000.005	60.00 ea	31.00 /mh	465	5.00 /ea	300	-	-	-	-	-	-	765	951
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	250.00 /ea	250	-	-	-	-	-	-	281	293
	Bubble Test	11000.005	1.00 ls	31.00 /mh	496	250.00 /ls	250	-	-	-	-	-	-	746	944
	Start up and Training	11000.005	1.00 ls	31.00 /mh	31	-	-	-	-	-	-	-	-	31	43
	Compressed Gas Aeration System				2,697		800	/LS						3,497	4,576
GEN	General				2,697		800							3,497	4,576
400	Orbal Anaerobic Reactor				2,697		800	/LS						3,497	4,576
600	Aerobic Digester 5 and 6														
GEN	General														
11-23	Course Bubble Aeration System														
	Aeration Equipment Supply	11000.010	1.00 ea	31.00 /mh	31	394,100.00 /ls	394,100	-	-	-	-	-	-	394,131	394,143
	Diffused Air Drop Pipe	11000.010	4.00 ea	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	Diffused Air Drop Pipe Support	11000.010	8.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Diffused Air Header	11000.010	4.00 ea	31.00 /mh	1,488	-	-	-	-	-	-	-	-	1,488	2,083
	Diffused Air Header Support	11000.010	16.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Diffused Air Laterals	11000.010	8.00 ea	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	Diffused Air Lateral Supports	11000.010	32.00 ea	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	Diffused Air Diffusers	11000.010	112.00 ea	31.00 /mh	694	-	-	-	-	-	-	-	-	694	972
	Anchors for Equipment	11000.005	112.00 ea	31.00 /mh	868	5.00 /ea	560	-	-	-	-	-	-	1,428	1,775
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	1,500.00 /ea	1,500	-	-	-	-	-	-	1,531	1,543
	Bubble Test	11000.005	1.00 ls	31.00 /mh	496	250.00 /ls	250	-	-	-	-	-	-	746	944
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Course Bubble Aeration System				11,544		396,410	/LS						407,954	412,572
GEN	General				11,544		396,410							407,954	412,572
600	Aerobic Digester 5 and 6				11,544		396,410	/LS						407,954	412,572
650	Existing Digester 1 to 4														
GEN	General														
11-23	Course Bubble Aeration System														
	Aeration Equipment Supply in with Digester 5 and 6	11000.010	1.00 ea	31.00 /mh	31	/ls		-	-	-	-	-	-	31	43
	Diffused Air Drop Pipe	11000.010	8.00 ea	31.00 /mh	3,968	-	-	-	-	-	-	-	-	3,968	5,555
	Diffused Air Drop Pipe Support	11000.010	16.00 ea	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Diffused Air Header	11000.010	8.00 ea	31.00 /mh	2,976	-	-	-	-	-	-	-	-	2,976	4,166
	Diffused Air Header Support	11000.010	32.00 ea	31.00 /mh	1,984	-	-	-	-	-	-	-	-	1,984	2,778
	Diffused Air Laterals	11000.010	12.00 ea	31.00 /mh	2,976	-	-	-	-	-	-	-	-	2,976	4,166
	Diffused Air Lateral Supports	11000.010	72.00 ea	31.00 /mh	4,464	-	-	-	-	-	-	-	-	4,464	6,250
	Diffused Air Diffusers	11000.010	144.00 ea	31.00 /mh	893	-	-	-	-	-	-	-	-	893	1,250
	Anchors for Equipment	11000.005	350.00 ea	31.00 /mh	2,713	5.00 /ea	1,750	-	-	-	-	-	-	4,463	5,547
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	1,500.00 /ea	1,500	-	-	-	-	-	-	1,531	1,543
	Bubble	11000.005	1.00 ls	31.00 /mh	496	250.00 /ls	250	-	-	-	-	-	-	746	944
	Start up and Training	11000.005	1.00 ls	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Course Bubble Aeration System				22,019		3,500	/LS						25,519	34,327
GEN	General				22,019		3,500							25,519	34,327
650	Existing Digester 1 to 4				22,019		3,500	/LS						25,519	34,327
444516	Diffusers & Mixing System				125,159		668,135							793,294	843,358
444613	Screw Conveyor System														
350	Step Feed Process Building														
GEN	General														
11-500	Screw Conveyor System														
	Anchors for Equipment	11000.005	36.00 ea	31.00 /mh	279	25.00 /ea	900	-	-	-	-	-	-	1,179	1,291

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Cost/Unit	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11	-500 Screw Conveyor System														
	Grout Equipment	11000.005	4.00 cf	31.00 /mh	372	60.00 /cf	240	-	-	-	-	-	-	612	761
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	2,500.00 /ea	2,500	-	-	-	-	-	-	2,531	2,543
	Start up and Training	11000.005	1.00 ea	31.00 /mh	496	-	-	-	-	-	-	-	-	496	694
	Control Panel	11000.005	1.00 ea	31.00 /mh	496	/ea		-	-	-	-	-	-	496	694
	Controls	11000.005	1.00 ea	31.00 /mh	124	/ea		-	-	-	-	-	-	124	174
	Support Structure	11000.005	1.00 ea	31.00 /mh	2,976	/ea		-	-	-	-	-	-	2,976	4,166
	Conveyor Horizontal	14550.100	1.00 ea	31.00 /mh	2,232	-	-	-	-	-	-	-	-	2,232	3,125
	Chutes Stainless	14560.100	2.00 ea	31.00 /mh		-	-	0.00 /ea	0	-	-	-	-		
	Vertical Conveyors	14559.160	2.00 ea	31.00 /mh	1,984	/ea		-	-	-	-	-	-	1,984	2,778
	Supply Screw Conveyors (Spirac)	11000.230	1.00 ls	31.00 /mh		136,210.00 /ls	136,210	-	-	-	-	-	-	136,210	136,210
	Screw Conveyor System				8,990		139,850	/ls						148,840	152,436
	GEN General				8,990		139,850							148,840	152,436
	350 Step Feed Process Building				8,990		139,850	/LS						148,840	152,436
	444613 Screw Conveyor System				8,990		139,850							148,840	152,436
444622	Dewatering Screw Press														
	350 Step Feed Process Building														
	GEN General														
11	-500 Dewatering Presses														
	Anchors for Equipment	11000.005	16.00 ea	31.00 /mh	124	100.00 /ea	1,600	-	-	-	-	-	-	1,724	1,774
	Grout Equipment	11000.005	4.00 cf	31.00 /mh	372	60.00 /cf	240	-	-	-	-	-	-	612	761
	Misc Materials	11000.005	1.00 ea	31.00 /mh	31	2,500.00 /ea	2,500	-	-	-	-	-	-	2,531	2,543
	Start up and Training	11000.005	1.00 ls	31.00 /mh	992	-	-	-	-	-	-	-	-	992	1,389
	Control Panel	11000.005	2.00 ea	31.00 /mh	992	/ea		-	-	-	-	-	-	992	1,389
	Controls	11000.005	1.00 ea	31.00 /mh	31	/ea		-	-	-	-	-	-	31	43
	Injection Ring	11000.005	2.00 ea	31.00 /mh	248	/ea		-	-	-	-	-	-	248	347
	Supply Dewatering Presses (huber)	11000.390	1.00 ls	-	-	715,000.00 /ls	715,000	-	-	-	-	-	-	715,000	715,000
	Air Compressor (if needed)	11000.390	1.00 ls	31.00 /mh	496	/ls		-	-	-	-	-	-	496	694
	Dewatering Presses	11000.390	2.00 ea	31.00 /mh	4,464	-	-	-	-	-	-	-	-	4,464	6,250
	Chutes Stainless	14560.100	2.00 ea	31.00 /mh		-	-	-	-	-	-	-	-		
	NPW Booster Pumps	11700.050	2.00 ea	31.00 /mh	992	/ea		-	-	-	-	-	-	992	1,389
	Dewatering Presses				8,742		719,340	/ls						728,082	731,579
	GEN General				8,742		719,340							728,082	731,579
	350 Step Feed Process Building				8,742		719,340	/LS						728,082	731,579
	444622 Dewatering Screw Press				8,742		719,340							728,082	731,579

Not for Signing



Wellington WWTP Expansion Project

Job #: 00001

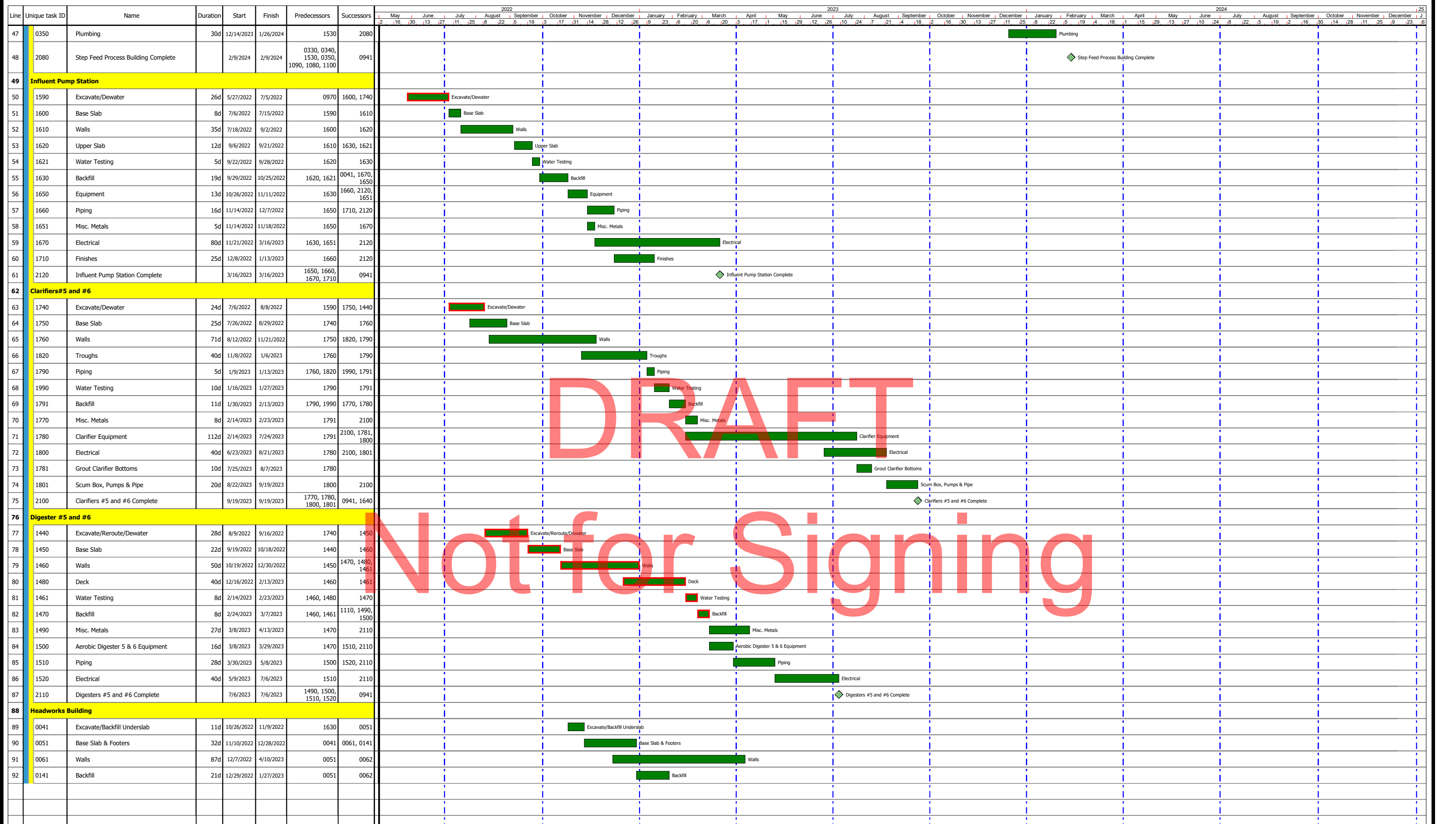
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Wellington WWTP Expansion Project

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Wellington WWTP Expansion Project

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SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof. The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix “SC” added thereto.

SC-1.01. Renumber Paragraph 1.01.A.21 to 1.01.A.21.a. and add the following new paragraphs:

1.01.A.21.b. *Geotechnical Baseline Report (GBR)*—The interpretive report prepared by or for Owner regarding subsurface conditions at the Site and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR’s own terms. The GBR is a Contract Document.

1.01.A.21.c. *Geotechnical Data Report (GDR)*—The factual report that collects and presents data regarding actual subsurface conditions at or adjacent to the Site, including Technical Data and other geotechnical data, prepared by or for Owner in support of the Geotechnical Baseline Report. The GDR’s content may include logs of borings, trenches, and other site investigations, recorded measurements of subsurface water levels, the results of field and laboratory testing, and descriptions of the investigative and testing programs. The GDR does not include an interpretation of the data. If opinions, or interpretive or speculative non-factual comments or statements appear in a document that is labeled a GDR, such opinions, comments, or statements are not operative parts of the GDR and do not have contractual standing. Subject to that exception, the GDR is a Contract Document.

SC-1.01. Renumber Paragraph 1.01.A.38 to 1.01.A.38.a, and add the following new paragraphs:

1.01.A.38.b. *Specialist*—The term Specialist refers to a person, partnership, firm, or corporation of established reputation (or if newly organized, whose personnel have previously established a reputation in the same field), which is regularly engaged in, and which maintains a regular force of workers skilled in either (as applicable) manufacturing or fabricating items required by the Contract Documents, or otherwise performing Work required by the Contract

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Documents. Where the Specifications require the installation by a Specialist, that term shall also be deemed to mean either the manufacturer of the item, a person, partnership, firm, or corporation licensed by the manufacturer, or a person, partnership, firm, or corporation who will perform the Work under the manufacturer's direct supervision.

SC-1.01. Add the following language at the end of Paragraph 1.01.A.40:

Substantial Completion is further defined as (i) that degree of completion of the Project's operating facilities or systems sufficient to provide Owner the full time, uninterrupted, and continuous beneficial operation of the Work; and (ii) required functional, performance and acceptance, or startup testing has been successfully demonstrated for components, devices, equipment, and instrumentation and control to the satisfaction of Engineer in accordance with the requirements of the Specifications.

SC-2.01 Delete Paragraph 2.01.B. and Paragraph 2.01.C. in their entirety and insert the following in their place:

2.01.B. Evidence of Contractor's Insurance: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

2.01.C. Evidence of Owner's Insurance: After receipt from Contractor of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner under Article 6 (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

SC-2.02. Amend first sentence in Paragraph 2.02.A to read as follows:

Owner will furnish to Contractor one hard copy of the Contract Documents (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF).

SC-3.01. Add the following new paragraph immediately after Paragraph 3.01.E:

3.01.F. Sections of Division 01, General Requirements, govern the execution of the Work of all sections of the Specifications.

SC-4.01. Delete the third sentence of Paragraph 4.01.A in its entirety.

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SC-5.02. Add the following language to the end of Paragraph 5.02.A.1:

Contractor shall not enter upon nor use property not under Owner control until appropriate easements have been executed and a copy is on file at the Site.

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.B:

5.03.C. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:

5.03.C.1. Report dated September 3, 2021, prepared by CTL Thompson, 400 North Link Lane, Fort Collins, CO 80524 entitled “Geotechnical Design Memorandum, Wellington Wastewater Treatment Plant, 6190 N.E. Frontage Road, Wellington, Colorado,” consisting of 68 pages. Technical Data contained in such report upon whose accuracy Contractor may rely are those indicated in the definition of Technical Data in the General Conditions.

5.03.C.2. Report dated July 31, 2001, prepared by Earth Engineering Consultants, Inc., 2301 Research Boulevard, Suite 104, Fort Collins, CO, entitled “Subsurface Exploration Report, Wellington Wastewater Treatment Plant, Wellington, Colorado,” consisting of 25 pages. Technical Data contained in such report upon whose accuracy Contractor may rely are those indicated in the definition of Technical Data in the General Conditions.

5.03.D. The following drawings of physical conditions relating to existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities) are known to Owner:

5.03.D.1. Drawings dated July 2002 prepared by The Engineering Company, 2310 East Prospect Road, Fort Collins, CO, entitled “Town of Wellington, Colorado, Wastewater Treatment Plant Phase I,” consisting of 91 sheets.

5.03.D.2. Drawings dated July 2016 prepared by Stantec, 2950 East Harmony Road, Fort Collins, CO, entitled “Town of Wellington Wastewater Treatment Plant Expansion” consisting of 78 sheets.

5.03.D.1.a. All the information in such drawings constitutes Technical Data on whose accuracy Contractor may rely.

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SC-5.06. Delete Paragraph 5.04 in its entirety and insert the following in its place:

SC-5.04 Differing Subsurface or Physical Conditions:

5.04.A. Notice: If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:

5.04.A.1. Differs materially from conditions shown or indicated in the GBR; or

5.04.A.2. Differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or

5.04.A.3. Differs materially from conditions shown or indicated in Contract Documents other than the GBR or GDR, to the extent the GBR and GDR are inapplicable; or

5.04.A.4. To the extent the GBR and GDR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
or

5.04.A.5. To the extent the GBR and GDR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or

5.04.A.6. To the extent the GBR and GDR are inapplicable, is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents; then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

5.04.B. Engineer's Review: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph SC-5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner

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regarding the Contractor's resumption or continuation of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

5.04.C. Owner's Statement to Contractor Regarding Site Condition: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

5.04.D. Possible Price and Times Adjustments:

5.04.D.1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

5.04.D.1.a. such condition must fall within any one or more of the categories described in Paragraph SC-5.04.A;

5.04.D.1.b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and,

5.04.D.1.c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

5.04.D.2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

5.04.D.2.a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or

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5.04.D.2.b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

5.04.D.2.c. Contractor failed to give the written notice as required by Paragraph SC/GBR 5.04.A.

5.04.D.3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.

5.04.D.4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

SC-5.06. Add the following language following Paragraph 5.06.A.2:

3. The following reports or drawings regarding Hazardous Environmental Conditions at the Site are known to Owner:

5.06.A.3.a. Report dated May 18, 2021, prepared by WSP USA, 4600 West 60th Avenue, Arvada, CO, entitled "Hazardous Material Assessment, Wastewater Treatment Plant, 6190 N.E. Frontage Road, Wellington, Colorado," consisting of 54 pages.

SC-6.01. Add the following language after Paragraph 6.01.A:

SC-6.02. Add the following new paragraph immediately after Paragraph 6.02.A:

6.02.A.1. Surety and insurance companies from which the bonds and insurance for this Project are purchased shall have an A.M. Best's rating of no less than [A:], in addition to other requirements specified herein.

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SC-6.03. Add the following new paragraph immediately following Paragraph 6.03.A.4:

6.03.A.5. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

6.03.A.5.a. Workers' Compensation and related coverages under Paragraph 6.03.A.1 and Paragraph 6.03.A.3 of the General Conditions:

6.03.A.5.a.1. State: Statutory.

6.03.A.5.a.2. Applicable Federal (e.g., Longshoreman's): Statutory.

6.03.A.5.a.4. Jones Act coverage, if applicable:

Bodily Injury by Accident, Each Accident: [A: \$]

Bodily Injury by Disease, Aggregate: [A: \$]

6.03.A.5.a.5. Employer's Liability:

Bodily Injury, Each Accident: [A: \$]

Bodily Injury by Disease, Each Employee: [A: \$]

Bodily Injury/Disease Aggregate: [A: \$]

For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of: [A: \$]

Foreign Voluntary Worker Compensation: Statutory

SC-6.03. Add the following new paragraph immediately following Paragraph 6.03.C.8:

6.03.C.9. Contractor's General Liability under Paragraph 6.03.B. and Paragraph 6.03.C of the General Conditions which shall eliminate the exclusion with respect to property under the care, custody and control of Contractor:

6.03.C.9.a. General Aggregate [B: \$]

6.03.C.9.b. Products - Completed Operations
Aggregate [C: \$]

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6.03.C.9.c. Personal and Advertising Injury
(per person/Organization) [D: \$]

6.03.C.9.d. Each Occurrence (Bodily Injury and
Property Damage) [E: \$]

6.03.C.9.e. Property Damage liability insurance will provide
Explosion, Collapse, and Underground coverages where applicable.

SC-6.03. Add the following new paragraph immediately following Paragraph 6.03.D:

6.03.D.1. Contractor's Automobile Liability

6.03.D.1.a. Bodily Injury:

Each Person [A: \$]

Each Accident [B: \$]

6.03.D.1.b. Property Damage:

Each Accident [C: \$]

6.03.D.1.a. Combined Single Limit of [D: \$]

SC-6.03. Add the following new paragraph immediately following Paragraph 6.03.E:

6.03.E.1. Excess or Umbrella Liability:

a) General Aggregate [A: \$]

b) Each Occurrence [B: \$]

SC-6.03. Add the following new paragraph immediately following Paragraph 6.03.F:

6.03.F.1. Pollution Liability:

a) Each Occurrence [A: \$]

b) General Aggregate [B: \$]

☐ If box is checked, Contractor is not required to provide
Contractor's Pollution Liability insurance under this Contract.

WELLINGTON WATER RECLAMATION FACILITY
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SC-6.03. Add the following language after Paragraph 6.03.G:

6.03.G.1. Include the following parties or entities as additional insured:

6.03.G.1.a. Town of Wellington, 3735 Cleveland Avenue, Wellington, CO 80549.

6.03.G.1.b. Jacobs Engineering Group, Inc., local office 2725 Rocky Mountain Avenue, Suite 330, Loveland, CO 80538.

6.03.G.1.c. Materials and Special Inspection TBD.

SC-6.03. Add the following new paragraph immediately following Paragraph 6.03.H:

6.03.H.1 Contractor's Professional Liability:

a) Each Claim [A: \$]

b) Annual Aggregate [B: \$]

[A: 6.03.K. Provide the following additional types of insurance:

6.03.K.1. [B:] [C: \$]]

SC-6.05. Add Paragraph 6.05.A.14:

6.05.A.14. Contractor shall purchase and maintain such equipment breakdown insurance or additional property insurance as set forth below, which will include the interests of Owner, Contractor, Subcontractors, Engineer, and any other persons or parties indicated in Paragraph 6.05.A.1.a. of the Supplementary Conditions, all of whom shall be listed as loss payee:

6.05.A.14.a. [A: *(include specific equipment breakdown insurance requirements).*]

6.05.A.14.b. [B: *(include additional insurance requirements).*]

SC-6.05. Add the following language as Paragraph 6.05.A.15:

6.05.A.15. Property insurance furnished under this Contract shall have deductibles no greater than [A: \$] for direct physical loss in any one occurrence for sublimits except for earthquake, which shall have a maximum deductible of [B: \$].

WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 IMPROVEMENTS AND EXPANSION

SC-6.05. Add the following to the list of items in Paragraph 6.05.A, as numbered items:

6.05.A.17. include for the benefit of Owner loss of profits and soft cost coverage including, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, plus attorney's fees and engineering or other consultants' fees, if not otherwise covered;

6.05.A.19. Include by express endorsement coverage of damage to Contractor's equipment.

SC-7.02. Add the following language to the end of Paragraph 7.02.B:

7.02.B.1. Contractor and Subcontractor regular working hours consist of [A: 8] [B: up to 10] working hours within [C: a 9] [D: an 11]-hour period [E: between 7:00 a.m. and 6:00 p.m.,] [F: on a regularly scheduled basis,] [G: ,] excluding Sundays and holidays. [H: Overtime work is work in excess of 40 hours per week.]

7.02.B.2. Owner's legal holidays are [A: *Insert List*].

SC-7.06. Add the following language at the end of Paragraph 7.06.A:

Contractor shall perform a minimum of 65 percent of the onsite labor with its own employees.

SC-7.08. Add the following new paragraph immediately after Paragraph 7.08.A:

7.08.B. Owner will pay for the following construction permits and licenses:

7.08.B.1. Town of Wellington Building Department Building Permit.

SC-7.09. Delete Paragraph 7.09.A in its entirety and insert the following in its place:

7.09.A. In accordance with Colorado Revised Statutes, 39-26-114, public works contracts that are to be used in a governmental capacity are exempt from payment of Colorado State sales tax. Upon application by Contractor, Subcontractor, or Supplier, the Colorado Department of Revenue will issue a certificate or certificates of exemption from payment of Colorado State sales tax as provided by Colorado Revised Statutes.

WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 IMPROVEMENTS AND EXPANSION

SC-7.10. Add the following new paragraph(s) immediately after Paragraph 7.10.C:

7.10.D. While not intended to be inclusive of all Laws or Regulations for which Contractor may be responsible under Paragraph 7.10, the following Laws or Regulations are included as mandated by statute or for the convenience of Contractor:

7.10.D.1. Pursuant to Colorado Revised Statute 8-17-101, 80 percent of skilled and common labor employed on the Project shall be Colorado residents.

SC-8.04. Add the following new paragraph immediately after Paragraph 8.03:

SC-8.04. *Claims Between Contractors*

8.04.A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, or Engineer, Contractor shall (without involving Owner, or Engineer) either i) remedy the damage; ii) agree to compensate the other contractor for remedy of the damages; or iii) remedy the damages and attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

8.04.B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer and the officers, directors, members, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all Claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, their officers, directors, members, partners, employees, agents, and other consultants and subcontractors, to the extent said Claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner or Engineer, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner or Engineer, on account of any such damage or Claim.

8.04.C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 11. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner and Engineer, for any delay, disruption, interference,

WELLINGTON WATER RECLAMATION FACILITY
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or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner or Engineer for activities that are their respective responsibilities.

SC-9.11. Add the following new paragraph immediately after Paragraph 9.11.A:

9.11.B. On request of Contractor, prior to the execution of any Change Order involving a significant increase in the Contract Price, Owner will furnish to Contractor reasonable evidence that adequate financial arrangements have been made by Owner to enable Owner to fulfill the increased financial obligations to be undertaken by Owner as a result of such Change Order.

SC-10.03. Add the following new paragraphs immediately after Paragraph 10.03.A:

10.03.B. Resident Project Representative (RPR) will be furnished by Engineer. The responsibilities, authority, and limitations of the RPR are limited to those of Engineer in accordance with Paragraph 10.08 and as set forth elsewhere in the Contract Documents and are further limited and described below.

10.03.C. Responsibilities and Authority:

10.03.C.1. Schedules: Review and monitor Progress Schedule, Schedule of Submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.

10.03.C.2. Conferences and Meetings: Conduct or attend meetings with Contractor, such as preconstruction conferences, progress meetings, Work conferences and other Project related meetings.

10.03.C.3. Liaison: (i) Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, and assist in understanding the intent of the Contract Documents; (ii) assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's onsite operations; (iii) assist in obtaining from Owner additional details or information when required for proper execution of the Work.

10.03.C.4. Interpretation of Contract Documents: Inform Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

10.03.C.5. Submittals: Receive submittals that are furnished at the Site by Contractor and notify Engineer of availability for examination. Advise Engineer and Contractor of the commencement of any Work or arrival of

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PHASE 3 IMPROVEMENTS AND EXPANSION

materials and equipment at Site, when recognized, requiring a Shop Drawing or Sample if the submittal has not been approved by Engineer.

10.03.C.6. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and provide recommendations to Engineer; transmit to Contractor, in writing decisions as issued by Engineer.

10.03.C.7. Review of Work and Rejection of Defective Work: (i) Conduct onsite observations of the Work in progress to assist Engineer in determining if the Work is, in general, proceeding in accordance with the Contract Documents; (ii) inform Engineer and Contractor whenever RPR believes that any Work is defective; (iii) advise Engineer whenever RPR believes that any Work will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged or does not meet the requirements of any inspection test, or approval required to be made; and advise Engineer of that part of the Work in progress that RPR believes should be corrected or rejected or uncovered for observation, or requires special testing, inspection, or approval.

10.03.C.8. Inspections, Tests, and System Startups: (i) Verify tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that Contractor maintains adequate records thereof; (ii) observe, record, and report to Engineer appropriate details relative to the test procedures and system startups; and (iii) accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections, and report to Engineer.

10.03.C.9. Records: (i) Maintain records for use in preparing Project documentation; (ii) keep a diary or log book recording pertinent Site conditions, activities, decisions and events; (iii) record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of Contractors, Subcontractors, and major Suppliers of materials and equipment.

10.03.C.10. Reports: (i) Furnish Engineer periodic reports of progress of the Work and of Contractor's compliance with the Progress Schedule and Schedule of Submittals; (ii) immediately notify Engineer of the occurrence of Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Hazardous Environmental Condition; and (iii) assist Engineer in drafting proposed Change Orders, Work Change Directives, and Field Orders; obtain backup material from Contractor as appropriate.

WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 IMPROVEMENTS AND EXPANSION

10.03.C.11. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

10.03.C.12. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify materials and equipment certificates and operation and maintenance manuals and other data required by Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents been delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

10.03.C.13. Completion: (i) Participate in a Substantial Completion inspection; assist in determination of Substantial Completion and the preparation of lists of items to be completed or corrected; (ii) Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied; and (iii) observe whether items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

10.03.D. Limitations of Authority: Resident Project Representative will not:

10.03.D.1. have authority to authorize a deviation from Contract Documents or substitution of materials or equipment, unless authorized by Engineer; or

10.03.D.2. exceed the limitations of Engineer's authority as set forth in Contract Documents; or

10.03.D.3. undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor's authorized representative; or

10.03.D.4. advise on, issue directions relative to, or assume control over an aspect of the means, methods, techniques, sequences, or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents; or

10.03.D.5. advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor; or

10.03.D.6. participate in specialized field or laboratory tests or inspections conducted offsite by others, except as specifically authorized by Engineer; or

WELLINGTON WATER RECLAMATION FACILITY
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10.03.D.7. accept Shop Drawings or Samples from anyone other than Contractor; or

10.03.D.8. authorize Owner to occupy the Project in whole or in part.

SC-10.08. Add the following new paragraph immediately after Paragraph 10.08.E:

10.08.F. Contractors, Subcontractors, Suppliers, and others on the Project, or their sureties, shall maintain no direct action against Engineer, its officers, employees, affiliated corporations, and subcontractors, for any Claim arising out of, in connection with, or resulting from the engineering services performed. Only the Owner will be the beneficiary of any undertaking by Engineer.

SC-11.01. Add the following new paragraph immediately after Paragraph 11.01.A:

11.01.A.1. In accordance with Colorado Revised Statute 24-91-103.6, no change order will be issued which causes the aggregate amount payable under the Contract to exceed amount appropriated for the original Contract without written notice to Contractor that appropriations have been made to cover the costs of the additional work.

SC-11.04. Add the following new paragraph immediately after Paragraph 11.04.C:

11.04.D. In the event Contractor submits request for additional compensation because of a change or differing Site conditions, or because of delays, acceleration, or loss of productivity, Owner reserves right, upon written request, to audit and inspect Contractor's books and records relating to the Project. Upon written request for an audit, Contractor shall make its books and records available within 14 days of request. Owner shall specifically designate identity of auditor. As part of audit, Contractor shall make available its books and records relating to the Project, including but not limited to Bidding Documents, cost reports, payroll records, material invoices, subcontracts, purchase orders, daily timesheets, and daily diaries. Audit shall be limited to those cost items which are sought by Contractor in a change order or claim submission to Owner.

SC-13.01.C.1. Delete 13.01.C.1. and replaced with:

Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, purchasing and contracting agents, expeditors, and timekeepers employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. Payroll costs

WELLINGTON WATER RECLAMATION FACILITY
PHASE 3 IMPROVEMENTS AND EXPANSION

and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

SC-13.01.C.4. Delete 13.01.C.4. and replaced with:

Costs due to:

- a. Negligence of Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to making good any damage to property.
- b. Correction of defective Work, disposal of materials or equipment wrongly supplied, which would cause the cost of Work to be greater than the Guaranteed Maximum Price (GMP), inclusive of Contractor Contingency Allowance.

SC-13.02.C. Delete 13.02.C and replaced with:

Contingency Allowances: Owner and Contractor agree to a sum to be agreed upon as the Owner Contingency Allowance which is for the sole use of the Owner to cover unanticipated costs. Owner and Contractor agree to a sum to be agreed upon as the Contractor Contingency Allowance which is for the sole use of the Contractor to cover costs not anticipated by the Contractor. Owner and Contractor agree to a sum to be agreed upon as the Warranty Contingency Allowance which is for the sole use of the Owner to cover costs not anticipated by the Contractor for warranty claims brought by the Owner to Contractor under Section 15.08, and notwithstanding Section 13.02.B, this Warranty Contingency Allowance shall remain open until the Warranty Period of Section 15.08 has closed.

SC-14.02. Add the following language at the end of Paragraph 14.02.D:

Tests required by Contract Documents to be performed by Contractor that require test certificates be submitted to Owner or Engineer for acceptance shall be made by an independent testing laboratory or agency licensed or certified in accordance with Laws and Regulations and applicable state and local statutes. In the event state license or certification is not required, testing laboratories or agencies shall meet the following applicable requirements:

14.02.D.6. Basic requirements of ASTM E329, "Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection" as applicable.

14.02.D.7. Calibrate testing equipment at reasonable intervals by devices of accuracy, traceable to the National Institute of Standards and Technology or accepted values of natural physical constants.

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SC-17.02. Add the following new paragraph immediately after Paragraph 17.01.

SC-17.02 Arbitration

SC-17.02.A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of [A:], subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.

SC-17.02.B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.

SC-17.02.C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

SC-17.02.C.1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and

SC-17.02.C.2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.

SC-17.02.D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.

SC-17.02.E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.

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SC-17.02.F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

17.02.F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

SC-17.03. Add the following new paragraph immediately after Paragraph 17.02:

SC-17.03 Attorneys' Fees: For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

END OF SECTION

DRAFT

Board of Trustees Meeting

Date: February 15, 2022
Submitted By: Patti Garcia, Town Administrator
Subject: General Fund Transfers to Water Fund and Sewer Fund; Budget Reductions

- **Presentation: Patti Garcia, Town Administrator**

EXECUTIVE SUMMARY

At the January 25, 2022, Board of Trustee meeting staff was directed to find reductions in the 2022 budget to help support the scheduled water and/or sewer fund increases. The amount needed to transfer from the general fund (GF) is a total of \$2,343,000 which is broken down as follows:

- \$653,000 10% transfer from GF to Water Fund
- \$390,000 10% transfer from GF to Sewer Fund
- \$1,300,000 Backfilling of ARPA funds booked to the GF that is to be transferred to the Water Fund

It was reported at the February 8, 2022, meeting that there would be no change in water rates or the water tier structure in 2022 based on the requested reductions and operational savings.

Staff reviewed the capital projects budgeted in 2022 and found savings in the Harrison Ave expansion project and is recommending removing one project (T-Bar Parking Lot) and postponing two projects until a later budget (Point to Point Wireless and Old Town Streets Repair).

A majority of the invoices for the Harrison Ave expansion project were billed in 2021 funds. The 2022 budget included \$1,050,000 for Harrison Ave project; however, it is anticipated that only \$350,000 remains to be billed in 2022. The project total is estimated to be \$1.5M

Staff has proposed the following reductions in the Capital Improvement Plan (CIP) and use of operational savings from the 2021 budget to meet the GF transfer of \$2,343,000:

- CIP - Harrison Ave Expansion Project - \$700,000
- CIP – T-Bar parking lot - \$150,000
- CIP – Point to Point Wireless - \$100,000
- CIP – Old Town Streets Repair - \$504,991
- 2021 GF Operational Savings - \$888,009
- TOTAL = \$2,343,000

A 2022 budget amendment resolution will be presented at the February 22, 2022 Board of Trustee meeting, staff is looking for support and/or recommendations on the proposed reductions and use of operational savings to meet the GF transfer request.

As there will be a tight timeframe to prepare the budget amendment, staff would appreciate any ideas that the



Trustees would like to present to be submitted prior to the work session. This will allow staff to be prepared to discuss them at the meeting.

BACKGROUND / DISCUSSION

STAFF RECOMMENDATION

ATTACHMENTS

None

Board of Trustees Meeting

Date: February 15, 2022
Submitted By: Patti Garcia, Town Administrator
Subject: Board Outreach and Discretionary Funds Discussion

- **Presentation: Patti Garcia, Town Administrator**

EXECUTIVE SUMMARY

In the 2022 adopted budget, the Trustees approved an Outreach Fund of \$107,500 and a Discretionary Fund of \$61,500.

An Outreach Fund is a fund used to promote activities or provide services that might not be provided due to lack of funding.

- To date, the Outreach Fund has committed \$82,500 to the Main Streets Program; this was approved at the January 25, 2022 Board of Trustee meeting with the approval of the Memorandum of Understanding. The Boys and Girls Club had presented and made a request for 2022 funding for \$25,000. This included \$5,000 which had been designated to Eagle After Hours in the past. The Boys and Girls Club have now taken over that program.
- The Main Street Program invoices the town in quarterly installments; the first installment of \$20,625 has been paid. The unencumbered available balance in the Outreach Fund is \$25,000; the current balance after the first quarterly payment to Main Street is \$61,875.

A discretionary fund is an amount of money that is available to spend on things that are not considered necessary but may be useful. In some municipalities, the elected officials use these funds to spend on small-scale projects.

- The Board Discretionary Fund includes the funding for the town's fireworks contract which is \$41,083 for 2022.
- The balance in the Discretionary Fund after payment of the fireworks contract is \$20,417.

It is up to the Trustees on how they want to use the funds; research has found that many municipalities create funding priorities and have an application process for outreach funds. Actions and/or eligibility requirements for the Outreach Fund may include:

- A 501(c)(3) nonprofit status and be in good standing with state and federal regulations
- An organization that demonstrates sound fiscal management
- Meet at least one area of the Wellington Strategic Plan
- Organizations that support activities and programs in Wellington
- Programs benefit citizen welfare and education in the region
- Organizations that address a unique community need
- Organizations that serve a broad spectrum of the community

- Organizations that avoid overlapping of services
- Report on how the grant funds were utilized by a specific date
- If a returning grantee, to be eligible the non-profit must have successfully completed the scope of work identified in prior grant applications and have expended all prior grant funds

Limitations could be placed on the amount of funds available per applicant and deadlines for application submittal.

The Board Discretionary Fund is available for small projects that the Trustees would like to contribute to that may not be already included in the budget. Examples include purchasing a piece of equipment for a park, funding a pilot program for a new activity for Wellington residents or financially supporting an activity that would benefit the town. The requests for the Board Discretionary Fund generally come from the Trustees themselves or town staff.

Staff is requesting direction on the following:

- Use of the balance of the Board Discretionary Fund as a presentation and request of funds was given by the Boy and Girls Club.
- Should a draft application process and reporting structure be created for the Outreach Fund for the 2023 budget for Trustee consideration.

BACKGROUND / DISCUSSION

STAFF RECOMMENDATION

ATTACHMENTS

1. Discretionary.Outreach fund presentation 02.15.2021

Board Outreach and Discretionary Funds

February 15, 2022 – Board of Trustee
Work Session





Trustees approved an Outreach Fund of \$107,500 and a Discretionary Fund of \$61,500 in the 2022 budget.

- An Outreach Fund is a fund used to promote activities or provide services that might not be provided due to lack of funding.
- A discretionary fund is an amount of money that is available to spend on things that are not considered necessary but may be useful. In some municipalities, the elected officials use these funds to spend on small-scale projects.



Outreach Fund - 2022

- Outreach Fund has committed \$82,500 to the Main Streets Program.
- The Boys and Girls Club had presented and made a request for 2022 funding for \$25,000. This included \$5,000 which had been designated to Eagle After Hours in the past. The Boys and Girls Club have now taken over that program.
- The Main Street Program invoices the town in quarterly installments; the first installment of \$20,625 has been paid.
- The unencumbered available balance in the Outreach Fund is \$25,000; the current balance after the first quarterly payment to Main Street is \$61,875.



Discretionary Fund

- Includes funding for the town's fireworks contract which is \$41,083 for 2022.
- Balance in the Discretionary Fund after payment of the fireworks contract is \$20,417.



Application process and/or eligibility requirements for an Outreach Fund may include:

- A 501(c)(3) nonprofit status and be in good standing with state and federal regulations
- An organization that demonstrates sound fiscal management
- Meet at least one area of the Wellington Strategic Plan
- Organizations that support activities and programs in Wellington
- Programs benefit citizen welfare and education in the region



Application process and/or eligibility requirements - Continued

- Organizations that address a unique community need
- Organizations that serve a broad spectrum of the community
- Organizations that avoid overlapping of services
- Report on how the grant funds were utilized by a specific date
- If a returning grantee, to be eligible the non-profit must have successfully completed the scope of work identified in prior grant applications and have expended all prior grant funds

Limitations could be placed on the amount of funds available per applicant and deadlines for application submittal.



The Board Discretionary Fund may be made available for small projects.

Examples: Purchasing a piece of equipment for a park, funding a pilot program for a new activity for Wellington residents or financially supporting an activity that would benefit the town.

The requests for the Board Discretionary Fund generally come from the Trustees themselves or town staff.



Staff direction is needed on the following:

- Use of the balance of the Board Discretionary Fund as a presentation and request of funds was given by the Boy and Girls Club.
- Should a draft application process and reporting structure be created for the Outreach Fund for the 2023 budget for Trustee consideration.

Outreach and Discretionary Fund Discussion

Any other questions or feedback?

Thank you!



Board of Trustees Meeting

Date: February 15, 2022
Submitted By: Patti Garcia, Town Administrator
Subject: Finance Committee - Presentation of Options

- **Presentation: Patti Garcia, Town Administrator**

EXECUTIVE SUMMARY

This presentation is related to the request from the Board of Trustees for staff to look into the creation of a Finance Committee for the Town of Wellington.

BACKGROUND / DISCUSSION

Based on a request by the Board of Trustees, research was conducted in order to create a Finance Committee for the Town of Wellington. This would be an advisory board to the Board of Trustees concerning town finances, budget and financial reporting. The role of a Finance Committee is generally broken down into two types; either directing policy or general budget oversight. A Finance Committee that is policy related would be looking at items such as financial policies, purchasing policies, fleet policies and working with the town's appointed auditor. A Committee that has general budget oversight would be meeting to review revenues and adopted budget vs actual expenses. A Committee can be both policy and have budget oversight but it would be a heavy lift for members of the committee as well as staff.

Pursuant to Trustee discussions, it is believed that the Wellington Finance Committee would be one that has general budget oversight. In researching other municipalities, there are generally seven members appointed to the Committee. The Town Administrator and Town Finance Director/Treasurer would serve as ex-officio members. The balance of the members could be made up of two Trustees and three residents or three Trustees and two residents.

Below are some ideas for committee goals and meeting dates and times for discussion.

Committee Goals

- Review and provide feedback to the Board of Trustees on the Town's annual draft budget, budgeting priorities, and initiatives as determined by the Trustees.
- Periodically review the need for rotation of the Town's independent auditor.
- Participate in the interview process of qualified firms being considered to serve as the Town's auditor.
- Review the Town's draft annual audit and provide recommendations regarding responses to the Town auditors management letter. Provide recommendations to the Board of Trustees to accept the Town's audited year-end financial statements.
- Review of revenues (monthly or quarterly)
- Review of budget vs actual expenses (monthly or quarterly)
- Review of reports generated by outside consultants for matters having a financial impact such as utility rate studies, long term financial planning and potential contracts for banking or financial services.

Meetings

- Monthly (as needed) or quarterly
- No more than 90 minutes in length

Vik Runkle, the town's interim Finance Director, will be unavailable for six weeks beginning April 30. She is very knowledgeable about the roles and responsibilities of a Finance Committee, and it is staff's request that the committee get established so she can participate in the initial meetings. There is a lot of information to absorb for those that will be appointed and it is recommended that five weekly meetings be held in order to get everyone up to speed. The tentative schedule and topics are listed below. The dates were chosen based on Trustee and Advisory Board meetings schedules, candidate forums, municipal court and conference room availability.

Meeting 1 – Wednesday, March 23

- Identify roles and responsibilities
 - Budget and accounting cycle/calendar.
 - Monthly or quarterly report to the BOT.
 - “Color of Money” presentation. This is a presentation of General Fund, Special Revenue Funds, Enterprise and Trust Funds. The accounting and auditing “parameters and rules” of revenues and expenditures of each Fund type.
 - TABOR/Debruce discussion.
 - Creation of bylaws.

Meeting 2 – Wednesday, March 30

- Review of General Fund
 - Revenues
 - Expenditures
 - CIP

Meeting 3 – Thursday, April 7

- Review of Street Fund
 - Revenues
 - Expenditures
 - CIP
- Review of Park Fund
 - Revenues
 - Expenditures
 - CIP
- Review of Conservation Trust Fund

- Revenues
- Expenditures
- Review of Library Trust Fund
 - Revenues
 - Expenditures

Meeting 4 – Thursday, April 14

- Review of Water Fund
 - Revenues
 - Expenditures
 - Debt and CIP
- Review of Sewer Fund
 - Revenues
 - Expenditures
 - Debt and CIP
- Review of Drainage Fund
 - Revenues
 - Expenditures
 - Debt and CIP

Meeting 5 – Wednesday, April 20

- Discuss policies: types of reserves, creation of CIP funds

Staff would prefer to have an ordinance for the creation of the Finance Committee on the February 22 agenda to allow for resident applications, interviews and appointments to take place prior to the first meeting on March 23, 2022 (tentative).

Items for Trustee discussion for this evening:

- Should the Finance Committee be policy driven or have general budget oversight?
- How many members should be on the Committee? What would be the preferred make up of Trustees and residents? Do the members need to commit to attending all five weeks of onboarding?
- How are Trustees selected to serve on the committee? Can they be appointed on February 22? They will need to be established in order to proceed with the interview process for resident appointees.
- The resident application process could be the same as other Wellington advisory boards unless there is direction from the Trustees to have specific eligibility requirements.
- Are resident appointees required to be residents of the town of Wellington or just the Growth Management Area?
- How long should Trustee and resident terms be? Other municipalities use two- or four-year terms with appointments in April of even-numbered years.
- Review of Committee Goals and provide input/recommendations to staff.

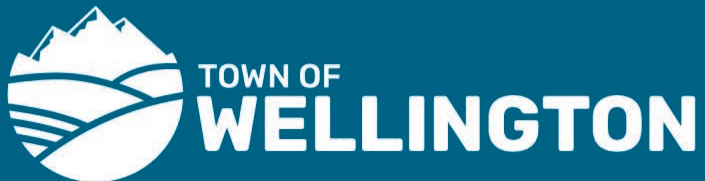
STAFF RECOMMENDATION

ATTACHMENTS

1. Finance Committee presentation 02.15.22

Finance Committee Options

February 15, 2022 – Board of Trustee
Work Session





Role of Finance Committee

- Policy – financial policies, purchasing policies, fleet policies, etc.

OR

- General Budget Oversight – Review revenues and adopted budget vs expenses.



Committee Goals

- Review annual draft budget, budgeting priorities, and initiatives.
- Review the need for rotation of the Town's independent auditor.
- Participate in the interview process of qualified firms being considered to serve as the Town's auditor.
- Review the Town's draft annual audit and provide recommendations regarding responses to the Town auditors management letter. Provide recommendations to the Board of Trustees to accept the Town's audited year-end financial statements.
- Review of revenues (monthly or quarterly)
- Review of budget vs actual expenses (monthly or quarterly)
- Review of reports generated by outside consultants for matters having a financial impact such as utility rate studies, long term financial planning and potential contracts for banking or financial services.



Creation of Finance Committee

- Adopted by Ordinance
- Tentatively scheduled for consideration at the February 22, 2022 Board of Trustee meeting



Finance Committee Meetings

- Five weeks of “on boarding” (March 23 – April 20)
- Then monthly (as needed) or quarterly
- No more than two hours in length



First Five Weeks

Proposed dates:

- Meeting 1 - Wednesday, March 23 @ 5:30 pm
- Meeting 2 - Wednesday, March 30 @ 5:30 pm
- Meeting 3 - Thursday, April 7 @ 5:30 pm
- Meeting 4 - Thursday, April 14 @ 5:30 pm
- Meeting 5 - Wednesday, April 20 @ 5:30 pm



Onboarding Topics

Meeting 1 - Topics

- Identify roles and responsibilities
- Budget and accounting cycle/calendar.
- Monthly or quarterly report to the BOT.
- “Color of Money” presentation. This is a presentation of General Fund, Special Revenue Funds, Enterprise and Trust Funds.
- TABOR/DeBruce discussion.
- Creation of bylaws.



Onboarding Topics

Meeting 2 - Review of General Fund

Meeting 3 – Review of Street, Park,
Conservation Trust and Library Trust Funds

Meeting 4 – Review Water, Sewer and
Drainage Funds

Meeting 5 – Discuss policies



Items for discussion/direction

- Finance Committee – Policy or Budget driven?
- How many members on the Committee? How many Trustees and how many residents?
- How are Trustees selected to serve on the Committee?
- Are there any application requirements for residents?
- How long should terms be?
- After review of the Committee Goals, what should be removed and what should be added?
- Any comments regarding the onboarding dates?
- Any comments or suggestions related to the onboarding topics?

Finance Committee Options

Any other questions or feedback?

Thank you!

