

PART 1 – GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions apply to this work as if specified in this section. Work related to this section is described throughout these Specifications
- B. Individual submittals required in accordance with the pertinent sections of these specifications. Other submittals may be required during the course of the project and are considered part of the normal work to be completed under the Contract.

1.02 SUBMITTAL LOG

- A. Contractor shall, within ten days of receipt of the Notice of Award prepare and submit for Engineer approval a detailed log of all the submittals required under this Contract, along with any other submittals identified by the Port or Contractor. The log shall include, but not be limited to, schedules, required construction work plans, equipment and material cut sheets, shop drawings, project record documents, test results, survey records, record drawings, results of QC testing, and all other items for which a submittal is required. The submittal log shall be organized by CSI Specification Division, and Section number and include the following information:
 - 1. Submittal Number
 - 2. Item identification.
 - 3. Scheduled submittal date, date returned, date approved.
 - 4. Date submittal or material is needed.
 - 5. After the submittal log is reviewed and approved by the Engineer, it shall become the basis for the submittal of all items by Contractor.

1.03 COMPLIANCE

- A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS AND MANUFACTURERS' LITERATURE

- A. The Port will not accept shop drawings that prohibit the Port from making copies for its own use.
- B. Shop drawings shall be prepared accurately and to a scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the work.
- C. All drawings submitted to the Engineer for approval shall be drawn to scale as ANSI D
- D. Required electronic formats for these drawings are as follows:
 - 1. AutoCad DWG
 - 2. PDF – Formatted to print to half-scale using 11x17 paper.
- E. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. General catalogs or partial lists will not be accepted. Manufacturers' original electronic files are required for submitting.

1.05 SUBMITTAL REVIEW

- A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:
 - 1. No Exceptions Taken - Means, accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. But it does not constitute approval or deletion of specified or required items not shown in the partial submittal.

ATTACHMENT C
DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

2. Make Corrections Noted – Same as Item 1, except that minor corrections as noted shall be made by Contractor.
 3. Reviewed – Submittal has been reviewed by the port. Does not constitute approval and the Contractor is responsible for requirements in submittal.
 4. Review as Noted – Submittal has to be reviewed by the Port with comments as noted.
 5. Revise and Resubmit – Means, rejected because of major inconsistencies or errors. Resolve or correct before next submittal.
- B. Submittals marked “No Exceptions Taken”, “Make Corrections Noted” or “Reviewed as Noted” authorizes Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.
- C. When submittals or prints of shop drawings have been marked “Revise and Resubmit” or “Rejected,” Contractor shall make the necessary corrections and submit required copies. Every revision shall be shown by number, date, and subject in a revision block, and each revised shop drawing shall have its latest revision numbers and items clearly indicated by clouding around the revised areas on the shop drawing.
- D. Submittals authorized by the Engineer do not in any case supersede the Contract Documents. The approval by the Engineer shall not relieve the Contractor from responsibility to conform to the Drawings or Specifications, or correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Port of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Port or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Port has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.
- E. It is considered reasonable that the Contractor’s submittals shall be complete and acceptable by at least the second submission of each submittal. The Port reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 PREPARATION OF SUBMITTALS

- A. The Contractor shall use the Port supplied transmittal form for all submittals and email submittals in a clear PDF document to the Engineer at EMAIL.
- B. The Contractor shall use the eBuilder software to submit all shop drawings, catalog cuts, brochures including sample which must be hand-delivered. Notes, clouding, arrows or other post document generation notations must be applied directly into the electronic file using software designed for that purpose. **Each submittal shall be accompanied by a transmittal developed within the eBuilder software.**
- C. A separate submittal shall be prepared for each product or procedure and shall be further identified by referencing the Specification Section and paragraph number and each submittal shall be numbered consecutively. An example of the numbering protocol is given here for an Electrical Submittal “26 05 33-001 – PVC Schedule 80 Conduit”. If something is rejected and needs resubmitted it gets resubmitted with the same number adding an R for revised or .1, but the submittal number stays the same ALWAYS.
- D. Product submittals that cannot be accomplished electronically shall be accompanied by a printed version of the transmittal. These submittals will be hand delivered to the Port offices at One Sitcum Plaza, Attention: Engineering Department.
- E. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent or are related in any way must be submitted indicating the complete installation.

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SECTION 01 33 00 – SUBMITTAL PROCEDURES

Submittals shall not be altered once marked "No Exceptions Taken" Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.

- F. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work.
- G. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- H. All submittal packages including (but not limited to) product data sheets, mix designs, shop drawings and other required information for submittal must be submitted, reviewed and approved before the relevant scheduled task may commence. It is the responsibility of the Contractor to provide the submittal information which may drive a task on the construction schedule to submit items well enough in advance as to provide adequate time for review and comment from the Engineer without adversely impacting the construction schedule.
- I. When completing the eBuilder submittal form, a Date Due field is required to be completed. This field is intended to inform the Port of the urgency of the submittal. Failure of the Port to return the submittal by the date provided by the Contractor will not be considered grounds for a contract time extension.

3.02 MAINTENANCE OF SUBMITTAL LOG

- A. Prepare and submit for Port review a detailed submittal log conforming to the requirements of paragraph 1.02 of this section. When approved by the Engineer use the submittal log to track the transmittal of submittals to the Engineer, the receipt of submittal comments from the Engineer, and all subsequent action with respect to each submittal. Provide an updated copy of the submittal log to the Engineer during each weekly progress meeting, unless otherwise approved by the Engineer.

END OF SECTION

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PART 1 – GENERAL

1.01 SUMMARY

- A. The Work under this Section includes procurement, required storage prior to delivery, insurance, and transport of all vortex-type hydrodynamic separator equipment, materials, and appurtenances required for a complete installation of the vortex-type hydrodynamic separators (HDSs) as shown on the Drawings and specified herein.

1.02 REFERENCES

- A. Not Used.

1.03 SUBMITTALS

- A. Submit the following information in a single package under the Product Review category, according to Section 01 33 00, Submittal Procedures.
 - 1. Shop drawings showing general arrangement of equipment and dimensions and supporting hydraulic calculations.
 - 2. Structural design calculations sealed by a professional engineer licensed to practice in the State of Washington. Calculations shall demonstrate that the HDS structures are designed to meet above ground structural design requirements for concrete structures and applicable building codes.
 - 3. System performance data.
 - 4. Handling, storage and installation instructions.
 - 5. Manufacturer representative qualifications.
 - 6. Operation and maintenance instructions.

1.04 QUALITY ASSURANCE

- A. Field Quality Control:
 - 1. The Engineer will:
 - a. Review materials proposed for use.
 - b. Inspect prior to installation.
- B. Manufacturer shall provide, at no additional cost to the Port, maintenance of the hydrodynamic separators for a period of one year. Provide a schedule for tenant notification at the time of installation completion.

1.05 REFERENCE DOCUMENTS

- A. The following reference documents are available at the Port for review or are included in the Construction Plans:
 - 1. Stormwater Engineering Report for West Sitcum Marine Terminal, Parametrix, January 2018.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Hydrodynamic Separators supplier shall deliver all HDS materials to the West Sitcum Marine Terminal for storage by the General Contractor of the West Sitcum Stormwater Treatment project, and not before General Contractor has mobilized and is ready to accept delivery. The specific delivery location shall be designated by the Engineer. Supplier shall coordinate delivery with the Port's installation Contractor, who shall provide equipment for material offloading at the delivery site. No material shall be delivered prior to the times and dates specified by the Contractor. The approximate schedule for material delivery will be June through August 2018. The Port shall incur no additional costs if the delivery schedule differs from this delivery date window.
- B. Protect all materials from damage during delivery, offloading, and storage. Cover UV sensitive materials if materials will be stored for more than one week. Storage surfaces should be free from dirt, mud and debris.

PART 2 – PRODUCTS

2.01 VORTEX-TYPE HYDRODYNAMIC SEPARATORS

A. GENERAL REQUIREMENTS

1. Housing unit of the HDSs shall be constructed of pre-cast or cast-in-place concrete, no exceptions. Precast concrete components shall conform to applicable sections of ASTM C 478, ASTM C 857 and ASTM C 858 and the following:
 - a. Concrete shall achieve a minimum 28-day compressive strength of 4,000 pounds per square-inch (psi);
 - b. Unless otherwise noted, the precast concrete sections shall be designed to withstand lateral earth and AASHTO H-20 traffic loads;
 - c. Cement shall be Type III Portland Cement conforming to ASTM C 150;
 - d. Aggregates shall conform to ASTM C 33;
 - e. Reinforcing steel shall be deformed billet-steel bars, welded steel wire or deformed welded steel wire conforming to ASTM A 615, A 185, or A 497.
 - f. Joints shall be sealed with preformed joint sealing compound conforming to ASTM C 990.
 - g. Shipping of components shall not be initiated until a minimum compressive strength of 4,000 psi is attained or five (5) calendar days after fabrication has expired, whichever occurs first
2. Internal Components and appurtenances shall conform to the following:
 - a. Screen and support structure shall be manufactured of Type 316 and 316L stainless steel conforming to ASTM F 1267-01;
 - b. Hardware shall be manufactured of Type 316 stainless steel conforming to ASTM A 320;
 - c. Fiberglass components shall conform to the ASTM D 4097
 - d. Access system(s) conform to the following: Manhole castings shall be designed to withstand AASHTO H-20 loadings and manufactured of cast-iron conforming to ASTM A 48 Class 30.
3. The HDS system shall have a manually operated drain down valve to remove water from the treatment processing portions of the unit.
4. Manufacturer: Contech Engineered Solutions LLC models CDS 3025-6-C, 3035-6-C and 4040-8-C, or approved equal.

B. PERFORMANCE

1. The HDSs shall be sized to achieve an 80 percent average annual reduction in the total suspended solid load. Sizing should use particle size distribution having a mean particle size (d50) of 125 microns unless otherwise stated.
2. The HDSs shall be capable of capturing and retaining 100 percent of pollutants greater than or equal to 2.4 millimeters (mm) regardless of the pollutant's specific gravity (i.e.: floatable and neutrally buoyant materials) for flows up to the device's rated-treatment capacity. The HDSs shall be capable of capturing and retaining total petroleum hydrocarbons. The HDSs shall be capable of achieving a removal efficiency of 92 and 78 percent when the device is operating at 25 and 50 percent of its rated-treatment capacity respectively. These removal efficiencies shall be based on independent third-party research for influent oil concentrations representative of storm water runoff (20 ± 5 mg/L). The HDSs shall be greater than 99 percent effective in controlling dry-weather accidental oil spills.
3. The HDSs shall be designed with a sump chamber for the storage of captured sediments and other negatively buoyant pollutants in between maintenance cycles. The minimum storage capacity provided by the sump chamber shall be in accordance with the volume listed in Table 1. The boundaries of the

ATTACHMENT C**DIVISION 33 – UTILITIES****SECTION 33 44 43 – VORTEX-TYPE HYDRODYNAMIC SEPARATORS**

sump chamber shall be limited to that which do not degrade the HDSs treatment efficiency as captured pollutants accumulate. The sump chamber shall be separate from the treatment processing portion(s) of the HDSs to minimize the probability of fine particle re-suspension. In order to not restrict the Owner's ability to maintain the HDSs, the minimum dimension providing access from to the sump chamber shall be 16 inches in diameter.

4. The HDSs shall be designed to capture and retain Total Petroleum Hydrocarbons generated by wet-weather flow and dry-weather gross spills and have a capacity listed in Table 1 of the required unit.
5. The HDSs shall convey the flow from the design storm event of the drainage network, in accordance with required hydraulic upstream conditions as defined by the Engineer. If a substitute HDS is proposed, supporting documentation shall be submitted that demonstrates equal or better upstream hydraulic conditions compared to that specified herein. This documentation shall be signed and sealed by a Professional Engineer registered in the State of Washington. All costs associated with preparing and certifying this documentation shall be born solely by the Contractor.
6. The HDSs shall be Washington State Department of Ecology General Use Level Designation (GULD) approved systems for pretreatment. Basis of Design model numbers, required treatment capacities, and storage capacities are provided in Table 1.

Table 1
Storm Water Treatment Device
Treatment and Storage Capacities

Location	CDS Model	Port Asset Numbers	Treatment Capacity, cfs	Minimum Sump Storage Capacity $\text{yd}^3 (\text{m}^3)$	Minimum Oil Storage Capacity, gal(L)
Basin B	CDS3025-6-C	TBD	2.5	2.1 (1.6)	210 (795)
Basin A	CDS3035-6-C	TBD	3.8	2.1 (1.6)	263 (994)
Basin C	CDS4040-8-C	TBD	6.0	5.6 (4.3)	520 (1970)

PART 3 – EXECUTION**3.01 TRAINING**

- A. The HDS Supplier shall arrange for one 8-hour day of operations training for Port personnel provided by the manufacturer's representative during system startup.

END OF SECTION

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90% Design Drawings

PORT OF TACOMA

WEST SITCUM STORMWATER TREATMENT CONTRACT NO. 070664 MID NO. 201024.01

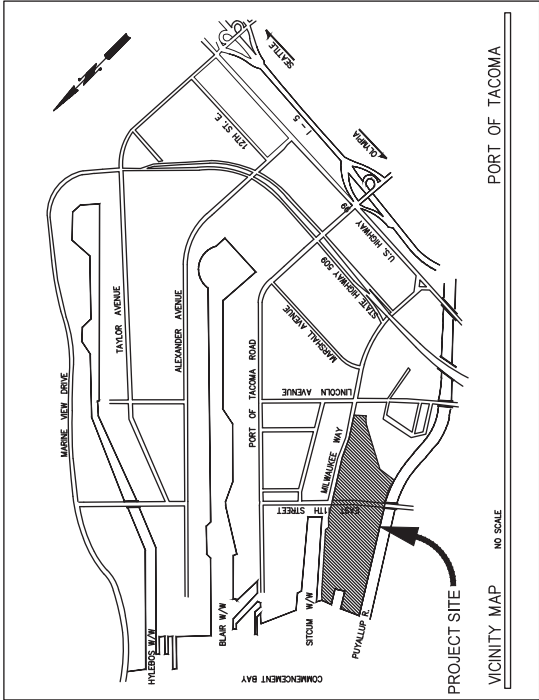
PORT COMMISSIONERS:

JOHN MCCARTHY
DONALD C. JOHNSON
RICHARD P. MARZANO
CLARE PETRICH
DON MEYER

PORT STAFF:

JOHN WOLFE
Chief Executive Officer
DAKOTA CHAMBERLAIN, PE
Chief Facilities
Development Director
JANE VANDENBERG, PE
Director of Engineering

HUGHES WIKE, PE
Project Manager



APPLICANT:
NAME: PORT OF TACOMA - WEST SITCUM TERMINAL
CONTACT: HUGHES WIKE
ADDRESS: 1400 EAST 11TH AVE., TACOMA, WA 98421
PHONE NUMBER: 253-320-5300
EMAIL: hwike@portoftacoma.com

ENGINEER:
NAME: PARAMETRIX
CONTACT: CEDAR SIMMONS
ADDRESS: 1400 EAST 11TH AVE., STE 300, BREMERTON, WA 98337
PHONE NUMBER: 541-598-7324
EMAIL: cssimmons@parametrix.com

SHEET DESIGNATION		DRAWING LIST	
		SHEET #	SHEET TITLE
G01	01		TITLE SHEET
G02	02		LEGEND, ABBREVIATIONS, AND GENERAL NOTES
G03	03		SITE KEY MAP AND SURVEY CONTROL
G04	04		PROCESS FLOW DIAGRAM AND DESIGN CRITERIA - BASINS A AND B
G05	05		PROCESS FLOW DIAGRAM AND DESIGN CRITERIA - BASIN C
G06	06		HYDRAULIC PROFILE
G07	07		CONSTRUCTION STAGING - BASINS A, B, & C
G08	08		TRAFFIC ROUTING PLAN
D01	09		DEMOLITION PLAN
D02	10		OWS DEMOLITION DETAILS
C01	11		SITE PLAN - BASIN A
C02	12		SITE PLAN - BASIN B
C03	13		SITE PLAN - BASIN C
C04	14		EROSION CONTROL PLAN - BASINS A, B, & C
C05	15		EROSION CONTROL NOTES AND DETAILS
C06	16		GENERAL CIVIL DETAILS
S01	17		STRUCTURAL DETAILS
M01	18		MECHANICAL PLAN - BASIN A
M02	19		MECHANICAL PLAN - BASIN B
M03	20		MECHANICAL PLAN - BASIN C
M04	21		MECHANICAL SECTION - BASIN A
M05	22		MECHANICAL SECTION - BASIN A
M06	23		MECHANICAL SECTION - BASIN B
M07	24		MECHANICAL SECTION - BASIN B
M08	25		MECHANICAL SECTION - BASIN C
M09	26		MECHANICAL SECTION - BASIN C
M10	27		DETAILS - HYDRODYNAMIC SEPARATOR - BASIN A
M11	28		DETAILS - HYDRODYNAMIC SEPARATOR - BASIN B
M12	29		DETAILS - HYDRODYNAMIC SEPARATOR - BASIN C
M13	30		DETAIL - WW6SL-8-24-VHC
M14	31		DETAIL - WW6SL-8-24-VHC
M15	32		DETAIL - WW6SL-8-24-VHC
E01	33		ELECTRICAL LEGEND AND ABBREVIATIONS
E02	34		ONE-LINE DIAGRAM AND LOAD CALCULATIONS
E03	35		P & ID
E04	36		ELECTRICAL SITE PLAN - BASIN A
E05	37		ELECTRICAL SITE PLAN - BASIN B
E06	38		ELECTRICAL SITE PLAN - BASIN C
E07	39		ELECTRICAL ENCLOSURE PLAN AND DETAILS
E08	40		ELECTRICAL PUMP STATION DETAILS
E09	41		ELECTRICAL ELEMENTARY DIAGRAMS
E10	42		ELECTRICAL ELEMENTARY DIAGRAMS

6583

G01

SH 01 OF 42

CONTRACT NO. 070664
MID NO. 201024.01
TOWNSHIP: 21N
RANGE: 3E
SECTION: 33 & 34
DATE: 01/01/2018
PROJECT: WEST SITCUM STORMWATER TREATMENT
SHEET: 01 OF 42

APPROVED:

DIRECTOR ENG. DATE

PRINTED BY: aismood Feb 01, 2018

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

DRAWING SCALE: AS NOTED

PARCEL: SEE G02

PHASE: 90%

PARAMETRIX

ENGINEERING PLANNING SKINNING ENVIRONMENTAL SCIENCES

1400 EAST 11TH AVE., STE 300
BREMER TON, WA 98337

DATE:

BY:

APP:

REVISION:

MARK:

PORT OF TACOMA

SEAL

OFFICIAL SEAL

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

SURVEY NOTES:

1. THIS MAP CORRECTLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY IN NOVEMBER, 2017.
2. CONVENTIONAL AND GPS SURVEY EQUIPMENT WAS USED IN THE PERFORMANCE OF THIS SURVEY. ALL EQUIPMENT IS MAINTAINED IN CONFORMANCE WITH CURRENT STATE STATUTE.
3. THIS SURVEY WAS PREPARED BY FIELD TRAVERSE AS PER STANDARD PRACTICE. A RELATIVE ACCURACY EXCEEDS 1 FOOT IN TEN THOUSAND.
4. ALL SURFACE FEATURES AND INVERT STRUCTURE ELEVATION SHOWN HEREON WERE FIELD LOCATED AND MEASURED BY PARAMETRIX FOR THIS SURVEY. UNDERGROUND UTILITY LINES ARE BASED UPON A COMBINATION OF ASBUILT PLANS, FIELD SURVEY, AND INFORMATION FROM ON-SITE UNDERGROUND UTILITY MARKINGS PERFORMED BY OTHERS.
5. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.
6. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON PUBLIC GIS INFORMATION PROVIDED BY THE PIERCE COUNTY. BOUNDARY LINES SHOWN ARE FOR REPRESENTATION PURPOSES ONLY AND ARE NOT TO BE USED FOR DESIGN ACTIVITIES THAT WILL RELY ON AN ACCURATE REPRESENTATION OF BOUNDARY INFORMATION.
7. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, WHICH MAY REVEAL RESTRICTIONS OR EASEMENTS OF RECORD. ACCORDINGLY, NONE ARE SHOWN HEREON.

HORIZONTAL DATUM:

THE HORIZONTAL DATUM FOR THIS SURVEY IS NAD 83/91, WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, BASED ON THE WASHINGTON STATE REFERENCE NETWORK (WSRN) WITH A CONFIRMATION TIE TO CITY OF TACOMA SURVEY MONUMENT NO. 552.

SURVEY MONUMENT NO. 555 SURVEY MONUMENT NO. 552
NORTHING: 705,705.799 NORTHING: 704,923.149
EASTING: 1167945.472 EASTING: 1168286.477

VERTICAL DATUM:

VERTICAL DATUM FOR THIS SURVEY IS MLLW (MEAN LOW LOW WATER) PER CITY OF TACOMA PUBLIC WORKS VERTICAL DATUM CHART NGVD 29 FIELD SURVEYED ELEVATION DATA ESTABLISHED UTILIZING THE WASHINGTON STATE REFERENCE NETWORK (WSRN) ADJUSTED TO CITY OF TACOMA VERTICAL CONTROL MONUMENT NO. 2595 AND CONVERTED TO MLLW DATUM WITH A MONUMENT TIE TO CITY OF TACOMA VERTICAL CONTROL MONUMENT NO. 2597.

VERTICAL CONTROL MONUMENT NO. 2595.
ELEV. 10.909' - NGVD 29
ELEV. 16.869' - MLLW

VERTICAL CONTROL MONUMENT NO. 2597.
ELEV. 10.047' - NGVD 29
ELEV. 16.007' -MLLW

THE CONVERSION FROM NGVD 29 TO MLLW DATUM WAS REFERENCED TO NOAA TIDAL BENCHMARK "TIDAL 22" AND THE CITY OF TACOMA PUBLIC VERTICAL DATUM CONVERSION CHART (EPOCH 1983-2007).

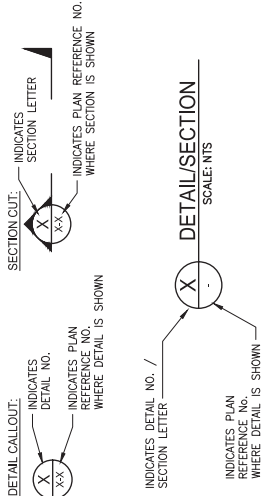
HIGHEST OBSERVED (12/17/2012) 14.87 FT.
MEAN HIGHER HIGH WATER (MHHW) 11.80 FT.
MEAN HIGH WATER (MHW) 10.92 FT.
MEAN TIDE LEVEL (MTL) 6.89 FT.
NGVD 29 5.96 FT.
MEAN LOW WATER (MLW) 2.85 FT.
MEAN LOWER LOW WATER (MLLW) 0.00 FT.

SOURCE: NOAA, STATION ID = 9446484,
NAME = TIDAL 22, TACOMA, WASHINGTON
NGVD29 + 5.96' = MLLW ELEVATION

GENERAL NOTES:

1. THIS PROJECT INVOLVES INSTALLING STORMWATER PUMP STATIONS, HYDRODYNAMIC SEPARATORS, TREATMENT SYSTEMS, CONSTRUCTION OF CONVEYANCE FEATURES, AND ASSOCIATED PAVEMENT RECONSTRUCTION.
2. THE PROJECT TERMINAL, PROJECT LOCATIONS ARE AS FOLLOWS:
BASIN A: 1002 MILWAUKEE WY, TACOMA, WA 98421
PARCEL NO. 8950000050 & 8950000061
BASIN B: 1002 MILWAUKEE WY, TACOMA, WA 98421
PARCEL NO. 8950000061
BASIN C: 1738 MILWAUKEE WY, TACOMA, WA 98421
PARCEL NO. 8950000050 & 8950000092
3. ALL SAFETY CODES, REGULATIONS AND SPECIFICATIONS SHALL BE COMPLIED WITH FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL WEAR ALL LIGHTS, SIGNS, PARRADES, FLAG PERSONNEL, AND CONE TRAFFIC CONTROL TO MAINTAIN THE PORT OF TACOMA'S DESIGNATED PERSONNEL.
4. ALL CONSTRUCTION SHALL BE COORDINATED WITH THE PORT OF TACOMA'S DESIGNATED PERSONNEL.
5. REFER TO SPECIFICATIONS SECTION 01 14 00 FOR WORK STAGING AND WORKING HOURS RESTRICTIONS.
6. ALL INDICATED SCALES IN DRAWINGS ARE APPROXIMATE AND DIMENSIONS SHOWN TAKE PRECEDENCE OVER SCALED DISTANCES. CONTRACTOR SHALL VERIFY DIMENSIONS AND QUANTITIES.
7. EXISTING FEATURES WERE DETERMINED BY FIELD SURVEYS PERFORMED IN JULY OF 2016 BY OTHERS AND BY PARAMETRIX IN 2017.
8. EXISTING UTILITY INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM THE PORT OF TACOMA'S EXISTING UTILITY PLANS PROVIDED BY THE PORT OF TACOMA AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.
9. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND VERIFY EXISTING UTILITY LOCATIONS, AS WELL AS CALL AND ARRANGE FOR ANY LOCATIONS NOT SHOWN ON THE EXISTING UTILITY PLANS. CONTRACTOR SHALL VERIFY DIMENSIONS AND QUANTITIES. CONTRACTOR SHALL ALSO WALK THE SITES WITH THE ENGINEER AND PORT PERSONNEL TO REVIEW EXACT LOCATION OF PROPOSED TREATMENT SYSTEMS AND TIE-IN LOCATIONS TO EXISTING CONVEYANCE SYSTEMS.
10. ALL TRACK, PAVEMENT, EXCAVATIONS MATERIALS NOT REQUIRED FOR NEW WORK AND OTHER MISCELLANEOUS ITEMS DESIGNATED FOR NEW WORK SHALL BE STOCKPILED ON SITE IN ACCORDANCE WITH ALL PROJECT SPECIFICATION, APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
11. MATERIAL STOCKPILES SHALL BE LOCATED AS SHOWN ON THE DRAWINGS.
12. FOR ALL PROJECT EXCAVATIONS, CONTRACTOR SHALL DEDICATE AS NECESSARY FOR DRY PLACEMENT OF NEW MATERIALS AND SHORE OPERATIONS IN ACCORDANCE WITH OSHA WORKING SAFETY REQUIREMENTS, AS APPLICABLE. REFER TO SPEC SECTION 31 23 19 AND 31 23 33.
13. CONTRACTOR TO RESTORE ALL AREAS AFFECTED BY WORK AND OPERATIONS. UPON COMPLETION OF A WORK AREA, THE CONTRACTOR SHALL THOROUGHLY CLEAN AND BROOM SWEEP THE AREA PRIOR TO MOVING TO NEXT WORK AREA.
14. REFERENCE DOCUMENTS INCLUDING GEOTECHNICAL REPORT BY HWA, AS BUILT PLANS, AND EXISTING UTILITY PLANS ARE PROVIDED IN THE APPENDIX OF THE CONTRACT DOCUMENTS.

DETAIL AND SECTION DESIGNATIONS



ABBREVIATIONS:

AC	ASPHALT CONCRETE	GS	GEOGRAPHIC INFORMATION SYSTEM
ASPH	ASPHALT	GPM	GALLONS PER MINUTE
AVE	AVENUE	GV	GATE VALVE
BLDG	BUILDING	HL	HIGH LEVEL
BMP	BEST MANAGEMENT PRACTICE	HP	HORSE POWER
CB	CATCH BASIN	ID	IDENTIFICATION
CFS	CUBIC FEET PER SECOND	IE	INVERT ELEVATION
CL	CENTERLINE	L	LENGTH
CL OR E	CENTERLINE OR EAST	MAX	MAXIMUM
CONC	CONCRETE	MIN	MINIMUM
CSBC	CRUSHED SURFACING BASE	MJ	MODULAR WETLAND SYSTEM
CSTC	CRUSHED SURFACING TOP	N	NORTH/NORTHERN
CULV	CULVERT	N.E.	NORTH/EAST
CT	CURB	NO	NUMBER
DEMO	DEMOLISH	NW	NORTHWEST
DIA	DIAMETER	OWS	OIL/WATER SEPARATOR
DIP	DUCTILE IRON PIPE	PAID	PROCESS AND INSTRUMENTATION DIAGRAM
DWG	DRAWING	PFD	PROCESS FLOW DIAGRAM
E	EAST/EASTING	PLC	PROGRAMMABLE LOGIC CONTROLLER
ECO	ECOLOGY	PMT	PARAMETER
EL/ELEV	ELEVATION	PVC	POLYVINYL CHLORIDE
EX/EXIST	EXISTING	R	RADIUS/RIVER
FH	FIRE HYDRANT	RCP	REINFORCED CONCRETE PIPE
FL	FLANGE	R/W	RIGHT OF WAY
FRP	FIBERGLASS REINFORCED PLASTIC		
FT	FEET, FOOT		

S	SOUTH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SO	SQUARE
SSMH	SANITARY SEWER MANHOLE
ST	STREET
STBY	STAND BY
STD	STANDARD
TD	TELEPHONE
TDM	TEMPORARY DAM
TDMH	TEMPORARY DAM HEAD
TESC	TEMPORARY CONTROL
TYP	TYPICAL
V	VOLT
W	WEST
W/W	WITH
YD	YARD



CHECKED BY	DATE
APPROVED:	
DIRECTOR ENG. DATE	
PRINTED BY: ondrej@p.com	Feb 01, 2018
PORT ADDRESS: ONE SITUUM PLAZA	
TACOMA, WA 98401-1837	

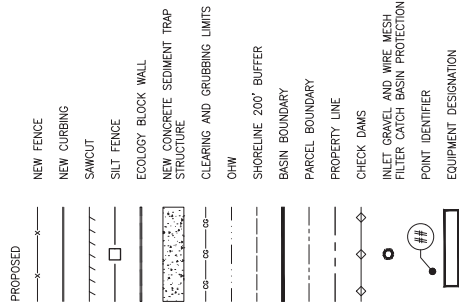
APPROVED:	
DIRECTOR ENG. DATE	
PRINTED BY: ondrej@p.com	Feb 01, 2018
PORT ADDRESS: ONE SITUUM PLAZA	
TACOMA, WA 98401-1837	

CONTRACT NO.	070664
DATE	2/01/2018
PROJECT	SEES 002
PHASE	90%

G02

SH 02 OF 42

PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION



LEGEND:
EXISTING
NEW FENCE
NEW CURBING
SAWCUT
SILT FENCE
ECOLOGY BLOCK WALL
NEW CONCRETE SEDIMENT TRAP STRUCTURE
CLEARING AND GRUBBING LIMITS
OHW
SHORELINE 200' BUFFER
BASIN BOUNDARY
PARCEL BOUNDARY
PROPERTY LINE
CHECK DAMS
INLET GRAVEL AND WIRE MESH FILTER CATCH BASIN PROTECTION
POINT IDENTIFIER
EQUIPMENT DESIGNATION



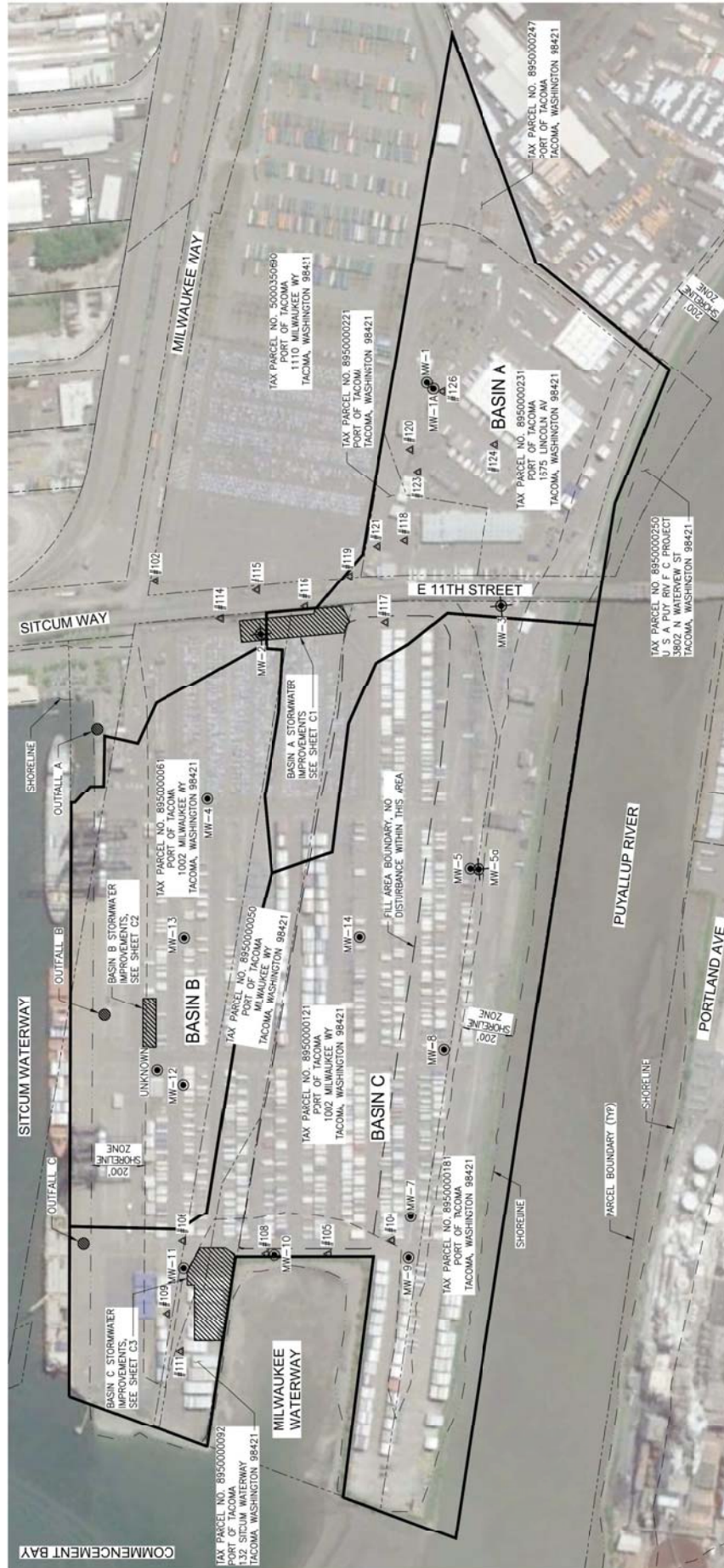
LEGEND:
EXISTING
SIGN
MAIL BOX
MANHOLE SEWER
MANHOLE STORM
CATCH BASIN
AREA DRAIN
POWER JUNCTION BOX
POWER PANEL
TELEPHONE HAND HOLE
TELEPHONE RISER
GATE POST/BOLLARD
FIRE HYDRANT
WATER VAULT
WATER VALVE
WATER BLOW OFF VALVE
MONITORING WELL
POWER POLE WITH DROP LINE
POWER POLE WITH TRANSFORMER
POWER POLE HIGH TENSION
POWER JUNCTION BOX
POWER POLE WITH LIGHT AND DROP LINE
COMMUNICATION LOCATES
POWER LOCATES
STORM LOCATES
WATER LOCATES
CHAIN LINK FENCE

SURVEY CONTROL DATA TABLE				
POINT #	COORDINATE	ELEVATION	DESCRIPTION	
102	709.67732	1.155-63.64	19.22	SET MAG NAL
103	709.67732	1.155-63.64	19.22	SET MAG NAL
104	710.98637	1.153-91.18	17.28	SET MAG NAL
105	711.33720	1.153-92.25	17.35	SET MAG NAL
106	711.33501	1.153-91.58	17.35	SET MAG NAL
108	711.33720	1.153-92.25	17.35	SET MAG NAL
109	711.75036	1.163-60.61	16.89	SET MAG NAL
111	711.82727	1.163-66.66	16.89	SET MAG NAL
112	709.62256	1.165-21.96	17.37	SET MAG NAL
114	709.62256	1.165-21.96	17.37	SET MAG NAL
115	709.62256	1.165-21.96	17.37	SET MAG NAL
116	709.27854	1.165-00.76	17.59	SET MAG NAL
117	709.27854	1.165-00.76	17.59	SET MAG NAL
118	709.27854	1.164-88.73	17.35	SET MAG NAL
119	709.27854	1.164-88.73	17.35	SET MAG NAL
120	709.43157	1.155-91.73	18.06	SET MAG NAL
121	709.62639	1.165-04.83	17.49	SET MAG NAL
122	709.62639	1.164-97.84	17.36	SET MAG NAL
123	709.43357	1.155-82.91	18.31	SET MAG NAL
124	709.43357	1.155-82.91	18.31	SET MAG NAL
125	709.43357	1.155-82.91	18.31	SET MAG NAL
126	709.43357	1.155-82.91	18.31	SET MAG NAL

LEGEND

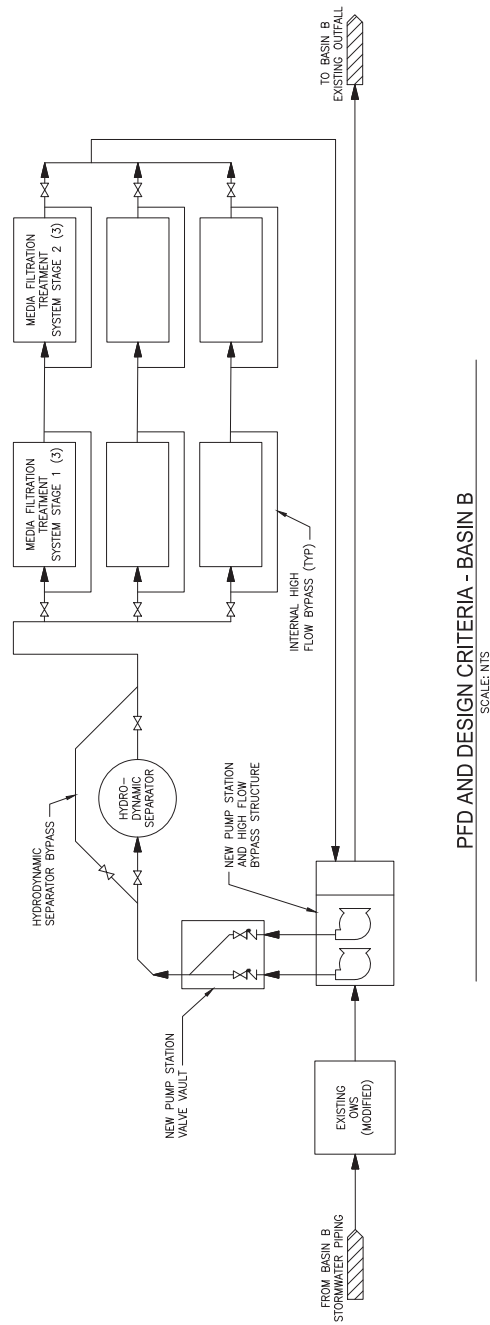
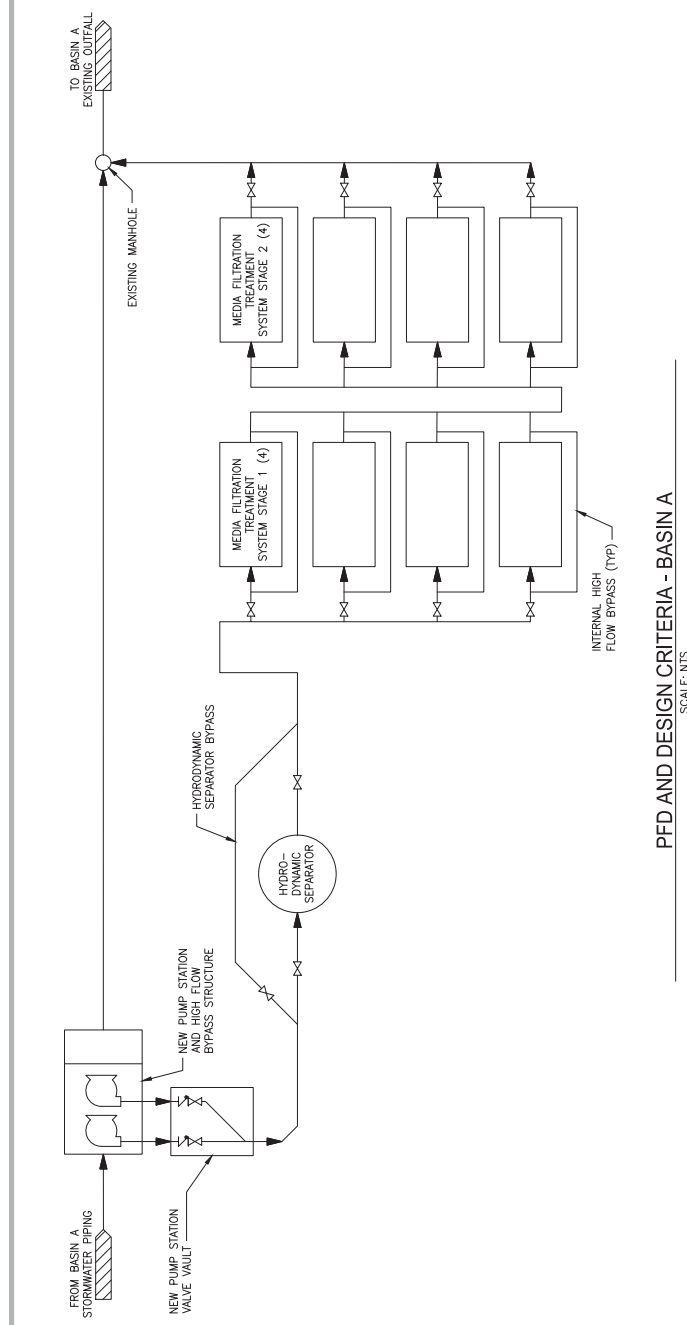
- SHORELINE
200' SHORELINE ZONE
DRAINAGE BASIN BOUNDARY
PARCEL BOUNDARY
WORK SITE LOCATION
FILL AREA BOUNDARY
MONITORING WELL - MEASURED IN THE FIELD IN APRIL 2008
MONITORING WELL - PREVIOUS SURVEY CONDUCTED IN 1996
SURVEY CONTROL POINT
OUTFALL

SITE KEY MAP AND SURVEY CONTROL



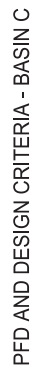
PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

6583	G03	WEST SITCUM STORMWATER TREATMENT SITE KEY MAP AND SURVEY CONTROL	APPROVED: _____ DIRECTOR ENG. DATE _____ CHECKED BY DATE _____ PROJ. ENGR DATE _____	PRINTED BY: <u>andrew f. o'Neil, 2018</u> PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837		MARK: _____ REVISION: _____ BY: _____ APPR: _____ DATE: _____		
6583	G03	WEST SITCUM STORMWATER TREATMENT SITE KEY MAP AND SURVEY CONTROL	APPROVED: _____ DIRECTOR ENG. DATE _____ CHECKED BY DATE _____ PROJ. ENGR DATE _____	PRINTED BY: <u>andrew f. o'Neil, 2018</u> PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837		MARK: _____ REVISION: _____ BY: _____ APPR: _____ DATE: _____		



DESIGN CRITERIA	
ITEM	DESCRIPTION
PORT OF JACOBA	
COMMENCEMENT BAY ORDINARY	
HIGH WATER MARK	
MEAN HIGHER HIGH WATER	
VALUE	
12.2 FT	
11.8 FT	
BASIN A	
WATER QUALITY	FLOW RATE
PUMP STATION	
PUMP QUANTITY (1 STBY)	2
PUMP CAPACITY (EA)	1,430 GPM @ 30.2 TDH
HP (EA)	20
BYPASS STRUCTURE	
TYPE	FLAP GATE
HEADLOSS	0.65 FEET
TREATMENT SYSTEM	
TYPE	2 STAGE MEDIA FILTRATION
QUANTITY, TOTAL	8 (100% REDUNDANCY)
CAPACITY, EA	2 @ 0.23 CFS,
OPERATING HEAD	6 @ 4.9 FT, 2 @ 3.4 FT
BASIN B	
WATER QUALITY	FLOW RATE
PUMP STATION	
PUMP QUANTITY (1 STBY)	2
PUMP CAPACITY (EA)	1,090 GPM @ 25.6 TDH
HP (EA)	12
BYPASS STRUCTURE	
TYPE	FLAP GATE
HEADLOSS	0.65 FEET
TREATMENT SYSTEM	
TYPE	2 STAGE MEDIA FILTRATION
QUANTITY, TOTAL	4 (100% REDUNDANCY)
CAPACITY, EA	4 @ 1 CFS, 2 @ 0.5777 CFS
OPERATING HEAD	4 @ 4.9 FT, 2 @ 3.4 FT

6583 G04 PROCESS FLOW DIAGRAM AND DESIGN CRITERIA - BASINS A AND B STORMWATER TREATMENT		TOWNSHIP: 21N RANGE: 3E SECTIONS: 33 & 34 VERT: MLTW PORT ADDRESS: ONE SITUUM PLAZA TACOMA, WA 98401-1837		PHASE: 90% DATE: 2/10/2021 PARCEL: SEE G02	
APPROVED:		DIRECTOR ENG. DATE CHECKED BY DATE PRINTED BY: andrew.r.pai, 2018		MARK: REVISION: BY: DATE:	
					



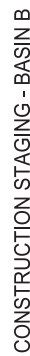
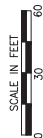
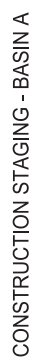
ITEM	DESCRIPTION	VALUE
	PORT OF TACOMA	
	COMMENCEMENT BAY ORDINARY	
	HIGH WATER MARK	12.2 FT

BASIN, C	4.9 CFS
WATER FLOW RATE	
PUMP STATION	2
PUMP QUANTITY (1 STB)	2,420 GPM @ 31.6 TDH
PUMP CAPACITY (EA)	25
HP (EA)	
BYPASS STRUCTURE	FLAP GATE
TYPE	0.65 FEET
HEADLOSS	2. STAGE MEDIA FILTRATION
TREATMENT SYSTEM	(100% REDUNDANCY)
TYPE	12
QUANTITY, TOTAL	10 @ 1 CFS, 2 @ 0.577 CFS
CAPACITY, EA	10 @ 4.9 FT, 2 @ 3.4 FT
OPERATING HEAD	

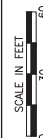
6583 SH 65 OF 62 G05		PROCESS FLOW DIAGRAM AND DESIGN CRITERIA - BASIN C WEST STICUM STORMWATER TREATMENT		APPROVED: _____ CHECKED BY: _____ DATE: _____ DIRECTOR ENG. DATE: _____ PROJ. ENGR DATE: _____				MARK: _____ REVISION: _____ BY: _____ APPR: _____ DATE: _____ FOR THE DESIGN PROFESSIONAL: _____ 		TOWNSHIP: 21N RANGE: 3E SECTIONS: 33 & 34 PRINTED BY: andrew.fab 01_01_2016 PORT ADDRESS: ONE STICUM PLAZA TACOMA, WA 98401-1837		PHASE: 90% PARCEL: SEE G02 DWT-HQZ: WMA3-S DAT: 1/20/21 COUNT: 076642 ID: 210924.01		DRAWING SCALE: AS NOTED	
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PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION





PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION



1. CLEARLY DELINEATE WORK LINES, STAGING, AND STOCKPILE AREAS AND TEMPORARY CLF PRIOR TO CONSTRUCTION. CLF SHALL BE 6" HIGH WEIGHTED AGAINST TIPPING AT BASE. DUE TO HIGH WIND GUARDS, MARK WITH FLASHING YELLOW LIGHTS.
2. ACCESS TO ALL SITES SHALL BE COORDINATED WITH PORT OF TACOMA AND FACILITY PERSONNEL.
3. NO DISTURBANCE BEYOND EXCAVATION LIMITS IS PERMITTED WITHOUT WRITTEN PERMISSION.
4. ALL FACILITY TRAFFIC LANES SHALL REMAIN CLEAR AT ALL TIMES UNLESS OTHERWISE NOTED.
5. PROJECTS SHALL BE COORDINATED WITH PROJECT BRASING PER ENGINEER, PORT STAFF, TENANT, AND SECURITY REQUIREMENTS.

- LEGEND:**
- | | |
|--|---------------------------------|
| | TEMPORARY CHAINLINK FENCE (CLF) |
| | STAGING AREA |
| | TRAFFIC ROUTING |
| | CONSTRUCTION ACCESS GATE |
| | LIMITS OF EXCAVATION |
| | REMOVE AND RESTORE |

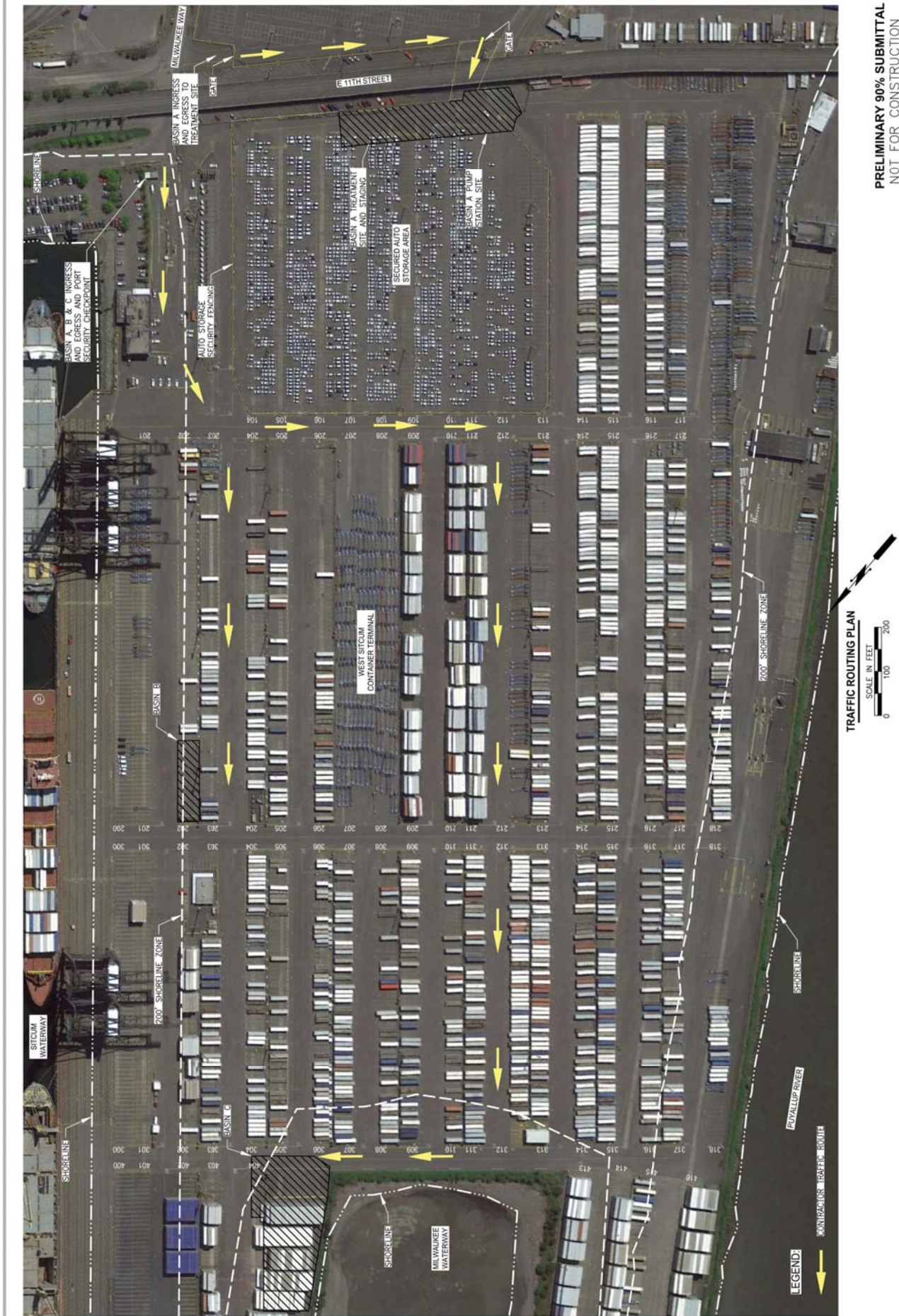


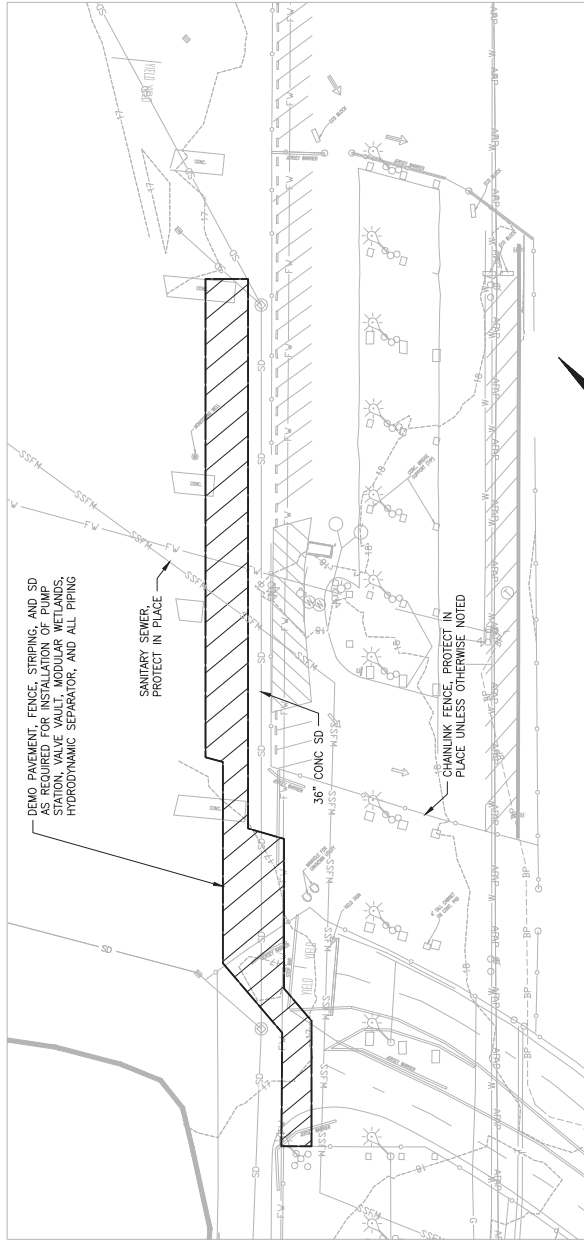
APPROVED:	CHECKED BY	DATE
DIRECTOR ENG. DATE	PROJ. ENGR	DATE
PRINTED BY: andrew Feb 01, 2018		
PORT ADDRESS: ONE SITCUM PLAZA		
TACOMA, WA 98401-1837		

WEST SITCUM		STORMWATER TREATMENT		CONSTRUCTION STAGING - BASINS A, B, & C	
TOWNSHIP: 21N		RANGE: 3E		SECTIONS: 33 & 34	
AT-HRZ: WA83-S		VERT: MLTW		DRAWING SCALE: AS NOTED	
PARCEL: SEE 602					

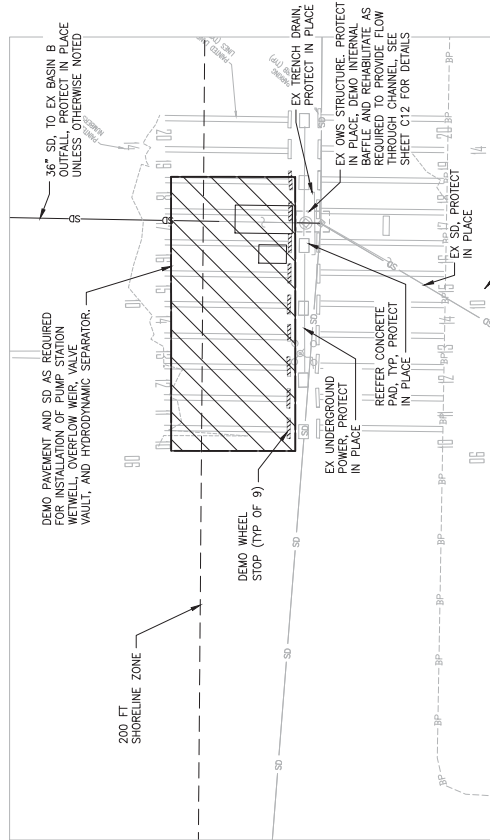
6583
G07
SH 07 OF 42
CONT/CONS: 070664
M. ID: 201024.01
PHASE: 90%

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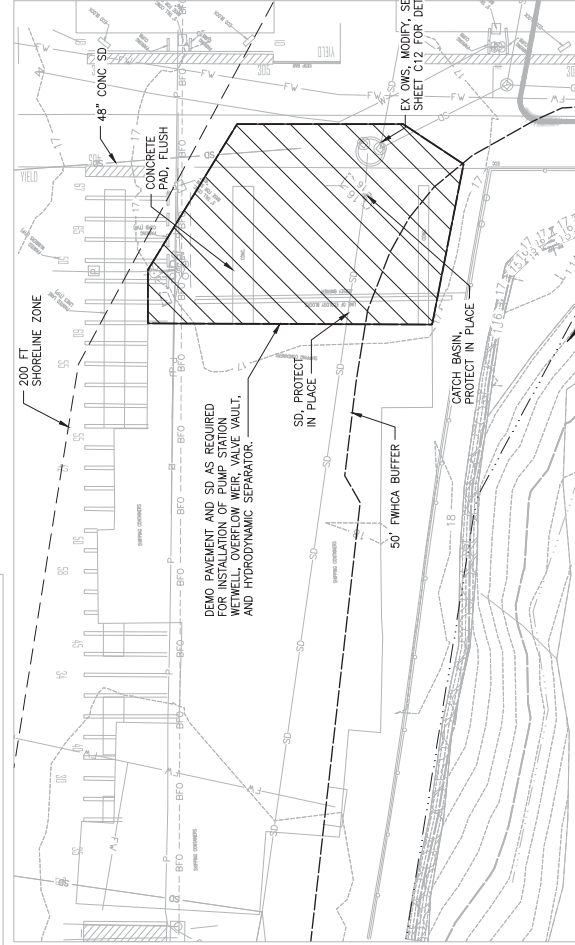




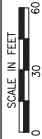
BASIN A - DEMO PLAN



BASIN B - DEMO PLAN



BASIN C - DEMO PLAN



PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

DEMOLITION NOTES:

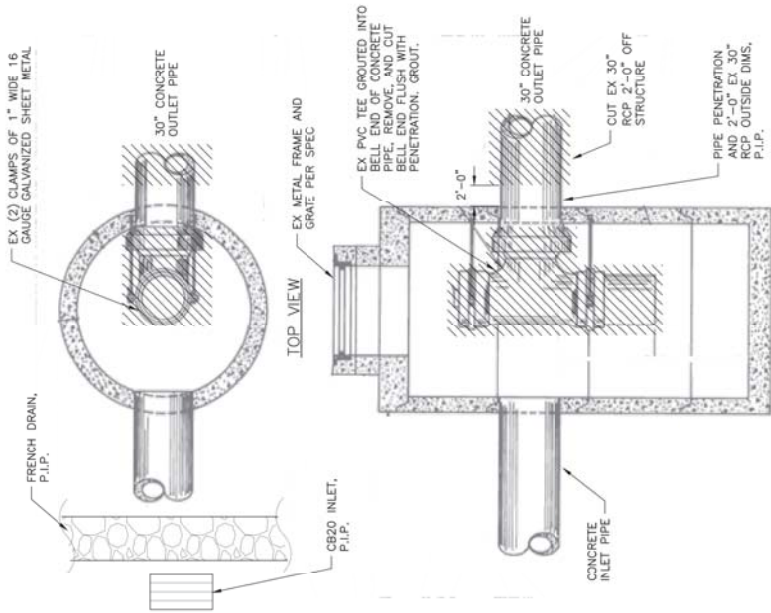
1. LOCATE AND PROTECT IN PLACE ALL EXISTING UNDERGROUND PIPING AND OTHER UTILITIES DURING ALL CONSTRUCTION PHASES. DEMOLITION SHALL BE BASED ON BEST AVAILABLE INFORMATION SHOWN BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR TO CONFIRM HORIZONTAL AND VERTICAL LOCATION & MATERIAL PRIOR TO CONSTRUCTION.
2. ALL DEMOLISHED MATERIAL SHALL BE DISPOSED AND/OR SALVAGED BY CONTRACTOR IN ACCORDANCE WITH THE SPECS.
3. PAVEMENT TO BE REMOVED OR DEMOLISHED SHALL BE SAW CUT IN STRAIGHT AND PERPENDICULAR LINES. REPLACE WITH AC PAVEMENT PER DETAIL 67007.

6583	D01	CONTRACT NO. 070664	TOWNSHIP: 21N	RANGE: 3E	SECTION: 33 & 34	DATE: 02/01/2018	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA
PHASE: 90%	DATE: 02/01/2018	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA	PROJECT: WEST SICUM
DATE: 02/01/2018	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA	PROJECT: WEST SICUM	CLIENT: PORT OF TACOMA	PROJECT: WEST SICUM	PROJECT: WEST SICUM



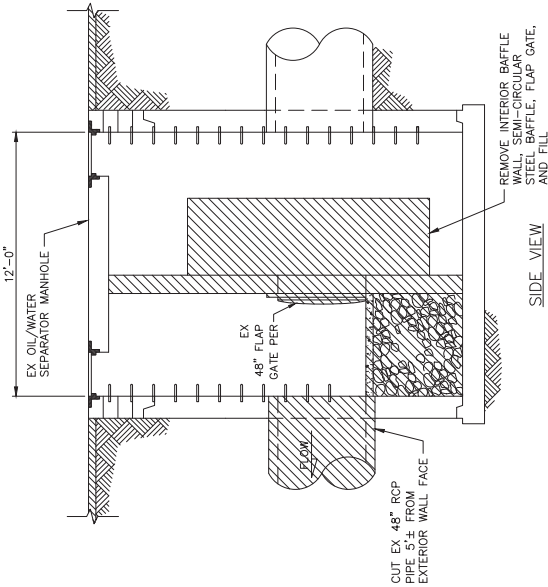
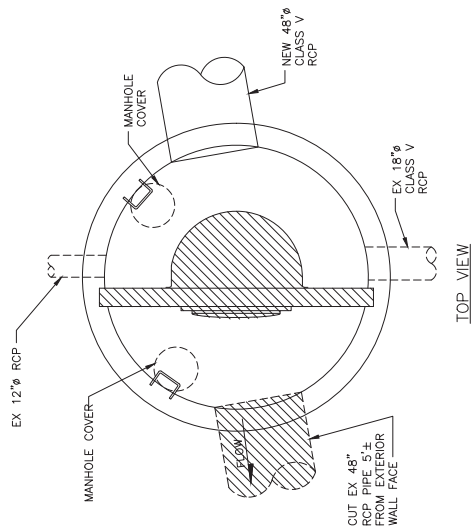
APPROVED: _____
DIRECTOR ENG. DATE: _____
PRINTED BY: _____
PORT ADDRESS: ONE SITUUM PLAZA
TACOMA, WA 98401-1837

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SIDE VIEW

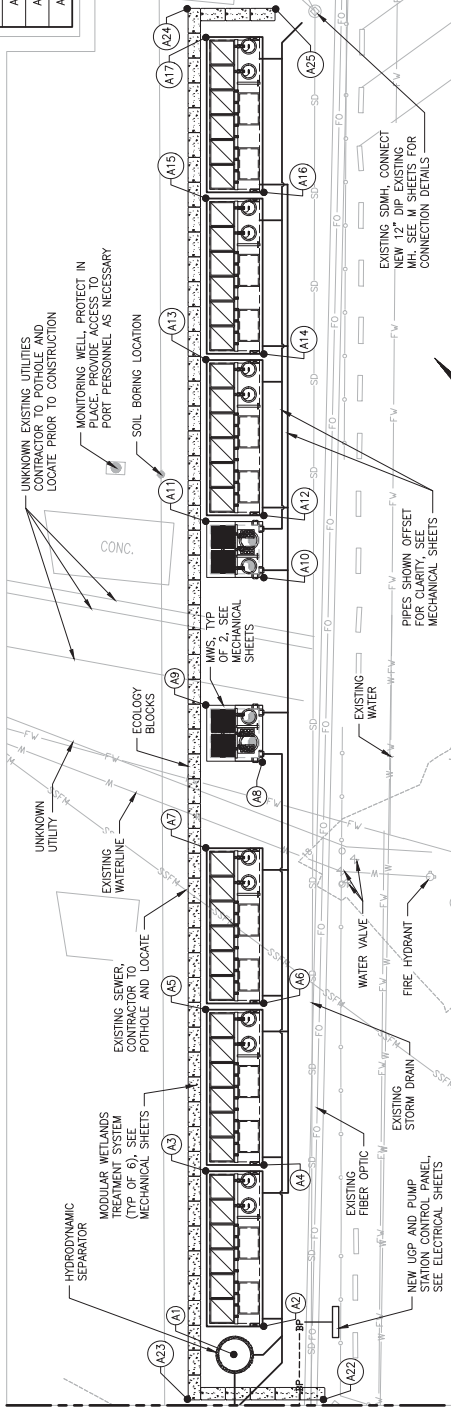
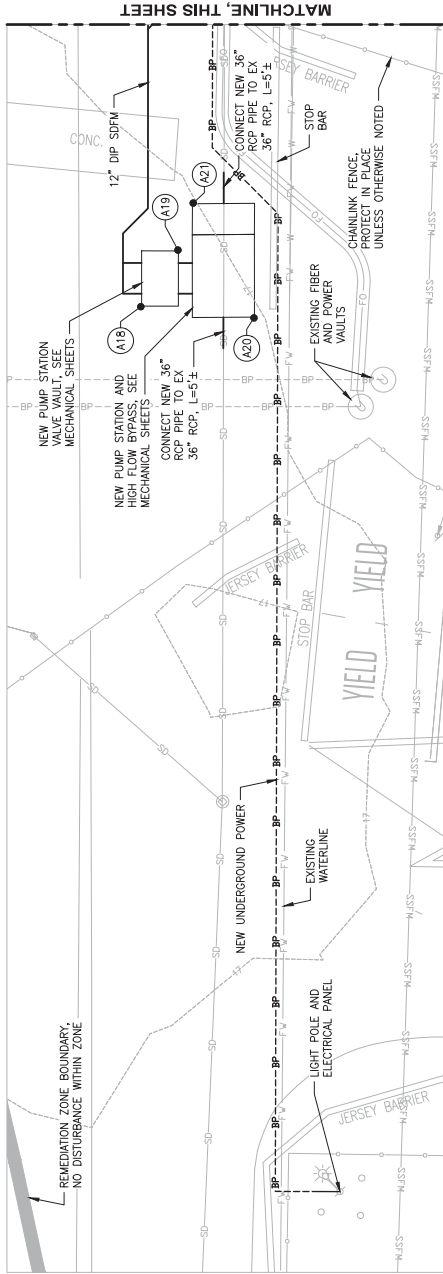
1
D4
EXISTING BASIN B
OIL/WATER SEPARATOR DETAIL
SCALE: NTS



SIDE VIEW

2
D4
EXISTING BASIN C
OIL/WATER SEPARATOR DETAIL
SCALE: NTS

6583		D02		SH 10 OF 42	
CONTS: 070664		TOWNSHIP: 21N		RANGE: 3E	
M. ID: 201024.01		DATE-HRZ: WA83-S		VERT: MLW	
PHASE: 90%		DRAWING SCALE: AS NOTED		PRINTED BY: andrew Feb 01, 2018	
TACOMA, WA 98401-1837		PORT ADDRESS: ONE SITCUM PLAZA		DIRECTOR ENG. DATE	
APPROVED:		CHECKED BY DATE		PROJ. ENGR DATE	
MARK: REVISION:		BY:		APPR: DATE:	
PARAMETRIX		TACOMA		TACOMA	
THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION		WEST SITCUM		STORMWATER TREATMENT	

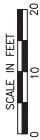


CONSTRUCTION NOTES:

1. SEE SHEET 608 FOR WORK AND STAGING AREA LIMITS.
2. PRECAST LIDS AND HATCHES INSTALLED SHALL BE DESIGNED TO 2500 LBS PER 1'x1' AREA UNLESS OTHERWISE NOTED.
3. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% RELATIVE DENSITY.
4. CONTRACTOR SHALL MATCH EXISTING GRADES UNLESS SHOWN OTHERWISE.
5. COORDINATES (CO) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS BASED ON EXISTING CONDITIONS.

6. CONTRACTOR SHALL VERIFY PIPE DIAMETERS AND MATERIAL WORKER CONSTRUCTION.
7. RESTORE PAVEMENT STRIPING AS REQUIRED.
8. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BASED ON RESULTS OF FIELD EXPLORATIONS. CONFIRM RELOCATION WITH PORT AND ENGINEER PRIOR TO PERFORMING WORK.

SITE PLAN - BASIN A



NOTES:

1. ALL JOINT, FITTINGS, AND VALVES SHALL BE RESTRAINED.
2. PREPARE SUBGRADE PER GEOTECHNICAL REPORT. SEE MECHANICAL SECTIONS FOR DETAILS.
3. CONTRACTOR TO POTHOLE PRIOR TO CONSTRUCTION AND CONFIRM MATERIAL, SIZE, HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES.

BASIN A SDFM PROFILE

SCALE: H = 20', V = 10'

PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

POINT TABLE

POINT #	NORTHING	EASTING	DESC
A1	709419.23	1164979.43	HYDRODYNAMIC SEPARATOR - CENTER
A2	709419.39	1164985.84	MWS 8x24 - SOUTH CORNER
A3	709443.65	1164996.70	MWS 8x24 - NORTH CORNER
A4	709438.12	1165003.87	MWS 8x24 - SOUTH CORNER
A5	709462.37	1165014.73	MWS 8x24 - NORTH CORNER
A6	709456.85	1165021.91	MWS 8x24 - SOUTH CORNER
A7	709481.10	1165032.77	MWS 8x24 - NORTH CORNER
A8	709484.94	1165048.96	MWS 8x8 - SOUTH CORNER
A9	709497.67	1165048.72	MWS 8x8 - NORTH CORNER
A10	709506.25	1165069.48	MWS 8x8 - SOUTH CORNER
A11	709518.97	1165069.24	MWS 8x8 - NORTH CORNER
A12	709513.45	1165076.41	MWS 8x24 - SOUTH CORNER
A13	709537.70	1165087.27	MWS 8x24 - NORTH CORNER
A14	709532.18	1165094.45	MWS 8x24 - SOUTH CORNER
A15	709556.43	1165105.31	MWS 8x24 - NORTH CORNER
A16	709550.92	1165112.49	MWS 8x24 - SOUTH CORNER
A17	709575.16	1165123.34	MWS 8x24 - NORTH CORNER
A18	709381.43	1164941.60	VALVE VAULT - WEST CORNER
A19	709383.72	1164952.04	VALVE VAULT - EAST CORNER
A20	709367.55	1164953.46	PUMP STATION - SOUTH CORNER
A21	709387.62	1164958.94	PUMP STATION - NORTH CORNER
A22	709404.20	1164984.58	ECOLOGOY BLOCK - SOUTH CORNER
A23	709419.20	1164969.01	ECOLOGOY BLOCK - SOUTHWEST CORNER
A24	709580.56	1165124.38	ECOLOGOY BLOCK - NORTH CORNER
A25	709570.85	1165134.46	ECOLOGOY BLOCK - NORTHEAST CORNER

MATCHLINE, THIS SHEET

UNKNOWN EXISTING UTILITIES
CONTRACTOR TO POTHOLE AND
LOCATE PRIOR TO CONSTRUCTION

MONITORING WELL. PROTECT IN
PLACE. PROVIDE ACCESS TO
PORT PERSONNEL AS NECESSARY

SOIL BORING LOCATION

UNKNOWN UTILITY

EXISTING WATERLINE
CONTRACTOR TO
POTHOLE AND LOCATE

EXISTING SEWER,
TREATMENT SYSTEM
(TYP OF 0), SEE
MECHANICAL SHEETS

MODULAR WELANDS
CONTRACTOR TO
POTHOLE AND LOCATE

HYDRODYNAMIC
SEPARATOR

NEW LGS AND PUMP
STATION CONTROL PANEL
SEE ELECTRICAL SHEETS

EXISTING FIBER OPTIC

EXISTING STORM DRAIN

WATER VALVE

FIRE HYDRANT

EXISTING WATER

PIPES SHOWN OFFSET
FOR CLARITY. SEE
MECHANICAL SHEETS

EXISTING SDFM. CONNECT
NEW 12" DIP EXISTING
WHS. SEE MECHANICAL SHEETS FOR
CONNECTION DETAILS

MWS, TYP
OF 2. SEE
MECHANICAL
SHEETS

CONC.

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

STOP BAR

200 F SHORT

50

50

50

50

18" SD

HYDRODYNAMIC SEPARATOR, SEE MECHANICAL SHEETS

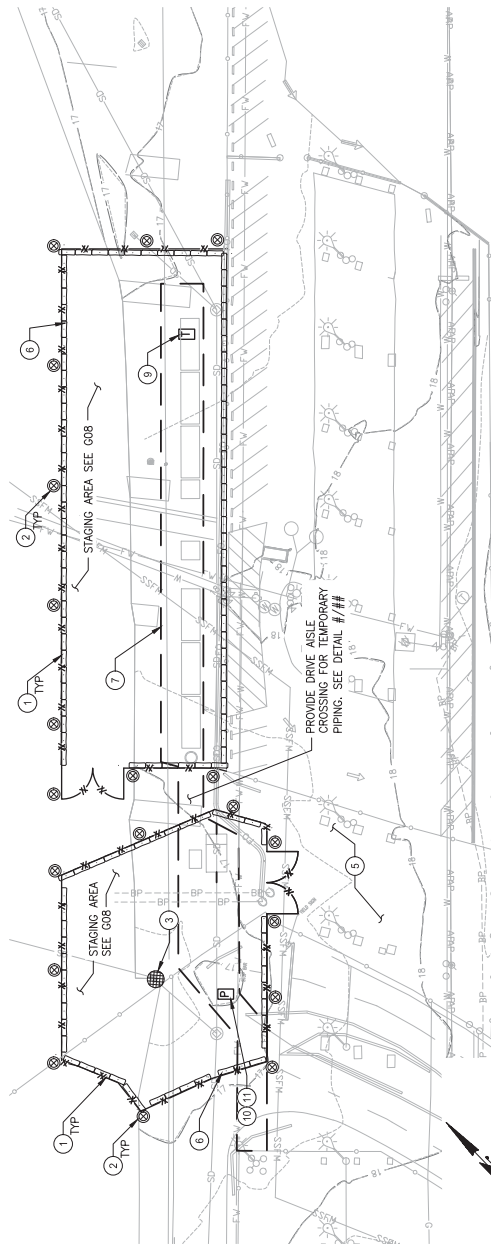
3. SEE SHEET GOR FOR HATCHES AND STAGING AREA LIMITS.
4. PRECAST LIDS AND HATCHES INSTALLED SHALL BE DESIGNED FOR 125,000-LB WHEEL LOADS PER SPEC SECTION 33.49.20 UNLESS OTHERWISE NOTED.
5. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% RELATIVE DENSITY.
6. CONTRACTOR SHALL MATCH EXISTING GRADES UNLESS SHOWN OTHERWISE.
7. COORDINATES (OO) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS BASED ON EXISTING CONDITIONS.
8. CONTRACTOR SHALL VERIFY PIPE DIAMETERS AND MATERIAL PRIOR TO CONNECTION.
9. RESTORE PAVEMENT STRIPING AS REQUIRED.
10. RELOCATE EXISTING UTILITIES AS NECESSARY BASED ON RESULTS OF FIELD EXPLORATIONS. CONFIRM RELOCATION WITH PORT AND ENGINEER PRIOR TO PERFORMING WORK.

BINDING EDGE

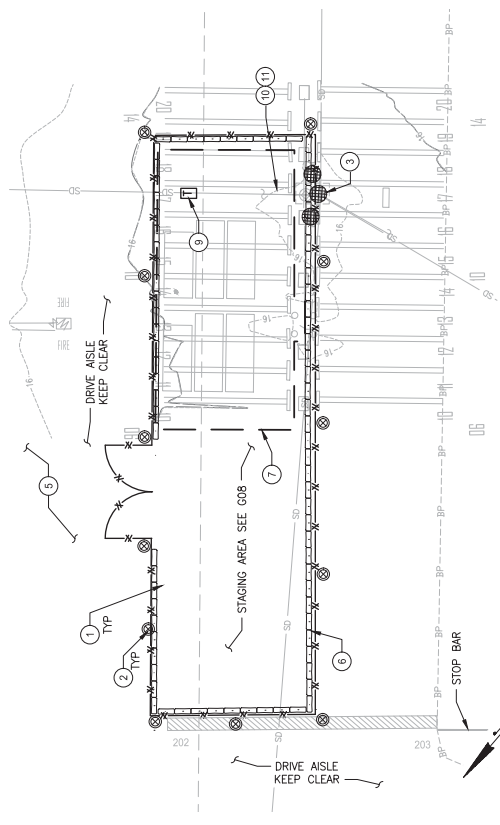
1. PRECAST GOR FOR WORK AND STAGING AREA LIMITS.
2. PRECAST LIDS AND HATCHES INSTALLED SHALL BE DESIGNED FOR 125,000-LB WHEEL LOADS PER SPEC SECTION 33.49.20 UNLESS OTHERWISE NOTED.
3. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% RELATIVE DENSITY.
4. CONTRACTOR SHALL MATCH EXISTING GRADES UNLESS SHOWN OTHERWISE.
5. COORDINATES (CO) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS BASED ON EXISTING CONDITIONS.
6. EXISTING SDWA IDENTIFIERS ARE ARBITRARY AND BASED ON PAST STUDIES.
7. CONTRACTOR SHALL VERIFY PIPE DIAMETERS AND MATERIAL PRIOR TO CONNECTION.
8. RESTORE PAVEMENT STRIPING AS REQUIRED.
9. RELocate EXISTING UTILITIES AS NECESSARY BASED ON RESULTS OF FIELD EXPLORATIONS. CONFIRM RELocation WITH PORT AND ENGINEER PRIOR TO PERFORMING WORK.

PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

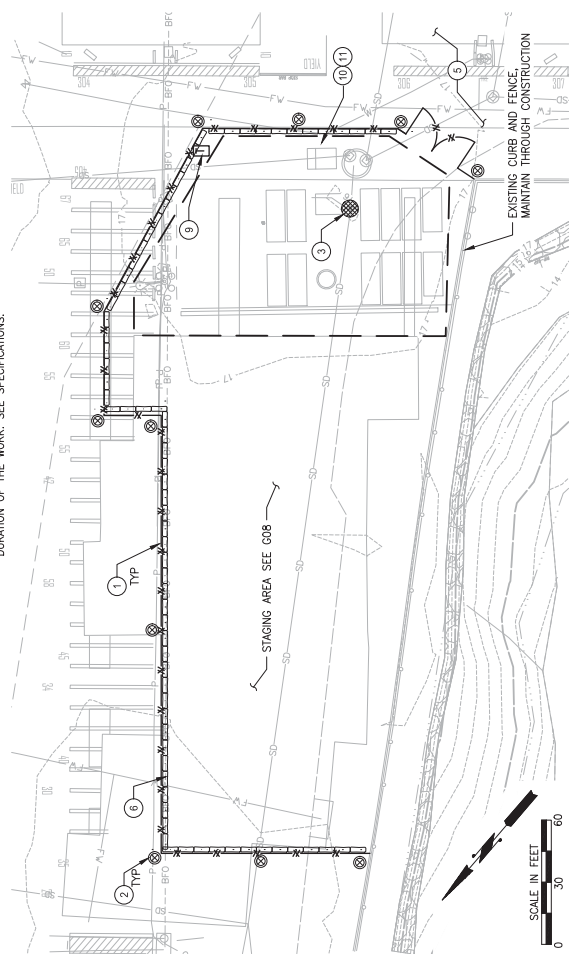
BINDING EDGE



TEMPORARY ESCP - BASIN A



TEMPORARY ESCP - BASIN B



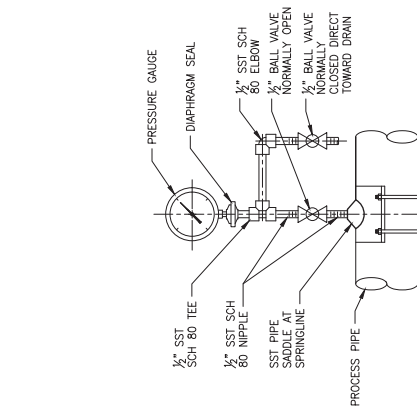
TEMPORARY ESCR - BASIN C

- NOTES:**
1. PROVIDE AND INSTALL TEMPORARY CONSTRUCTION FENCING INCLUDING ALL ACCESSORIES AND SUPPLIES TO PREVENT ACCESS TO WORK AREAS. PROVIDE AND INSTALL TEMPORARY FENCING ACCORDING TO PHASING, SECURITY, AND PORT AND TENANT REQUIREMENTS.
 2. PROVIDE AND INSTALL BARREL WITH FLASHING BARRICADE LIGHTS.
 3. PROVIDE AND INSTALL INLET PROTECTION PER 1/004.
 4. AT EACH CONSTRUCTION ENTRANCE/GATE, CONTRACTOR SHALL ESTABLISH AND MAINTAIN A TEMPORARY ASPHALT BARRIER TO CONTROL TRAFFIC.
 5. CONTRACTOR SHALL PROVIDE VACUUM SWEEPING AROUND PERIMETER OF ALL EXCAVATION, TRENCH, OR OTHER MATERIALS SHALL BE ALLOWED TO "TRACK" ACROSS THE TERMINAL. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
 6. CONTRACTOR SHALL INSTALL TEMPORARY CURB AROUND WORK ZONES.
 7. AC PAVEMENT REMOVAL AND LIMITS OF EXCAVATION, THE SITE IS FULLY PAVED AND THE EXCAVATION SHALL MARK EXCAVATION ZONES WITH CONCRETE OR ASPHALT SPRAY PAINT PRIOR TO REMOVAL.
 8. CONTRACTOR SHALL PROVIDE PLASTIC COVERING FOR SOIL STOCKPILES AND ASSOCIATE STORAGE MATERIALS WITH PROTECT COVERING AND TREATED PER NOTE 9.
 9. CONTRACTOR SHALL PROVIDE A TEMPORARY TREATMENT SYSTEM CAPABLE OF TREATING ALL WATER DISCHARGED FROM EXCAVATION AREAS TO MEET APPLICABLE PERMIT REQUIREMENTS. SEE SPECIFICATIONS.
 10. INSTALL GROUNDWATER DETERMINING SYSTEM AS NEEDED.
 11. INSTALL TEMPORARY STORMWATER RETENTION SYSTEM. CONTRACTOR SHALL SECURE THE EXISTING MANHOLE LID/OPENING DURING ROUTE. SEE SPECIFICATIONS.
 12. WORK MANAGER/DEPUTY CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SURFACE TYPING, GROUNDWATER, AND TEMPORARY STORMWATER ROUTE FLOWS FOR THE DURATION OF THE WORK. SEE SPECIFICATIONS.

ESCP LEGEND:

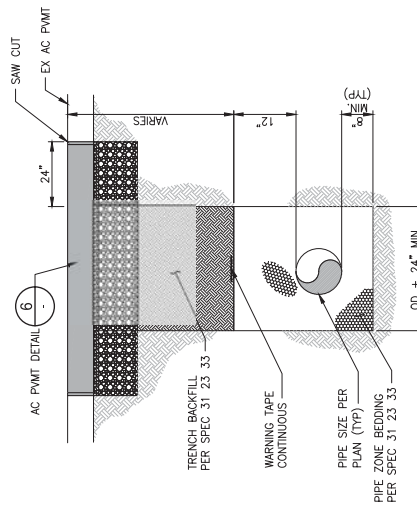
- | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |  |  |  |
| INLET PROTECTION | TEMPORARY CONSTRUCTION FENCE | CONSTRUCTION ACCESS GATE | BARREL WITH FLASHING BARRICADE LIGHTS | TEMPORARY CURB, SEE SPECIFICATIONS | TEMPORARY PUMPING SYSTEM | TEMPORARY TREATMENT SYSTEM | | | | |

6583		C04		STORMWATER TREATMENT		WEST SITCOM		APPROVED:		CHECKED BY DATE		PROJ. ENGR. DATE		DIRECTOR ENG. DATE		PRINTED BY: andrewb Feb 01, 2018		PORT ADDRESS ONE SITCOM PLAZA		TACOMA, WA 98401-1837				MARK: REVISION: BY: APPR: DATE:					
6583		C04		STORMWATER TREATMENT		WEST SITCOM		APPROVED:		CHECKED BY DATE		PROJ. ENGR. DATE		DIRECTOR ENG. DATE		PRINTED BY: andrewb Feb 01, 2018		PORT ADDRESS ONE SITCOM PLAZA		TACOMA, WA 98401-1837				MARK: REVISION: BY: APPR: DATE:					



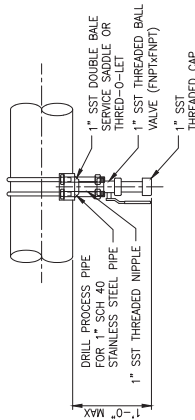
GAUGE INSTALLATION DETAIL

SCALE: NTS



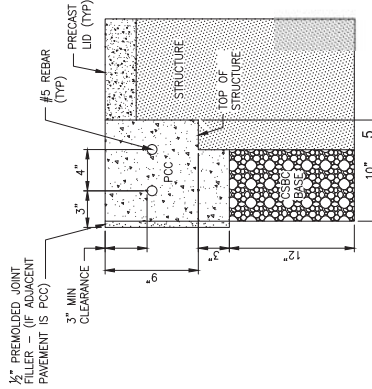
PIPE TRENCH DETAIL

SCALE: NTS



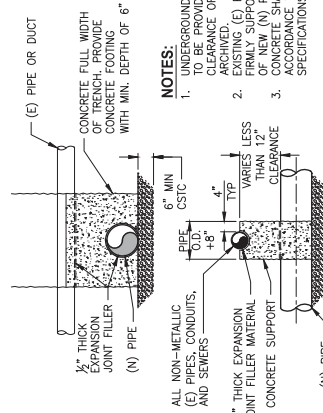
SAMPLE PORT DETAIL

SCAF-NTS



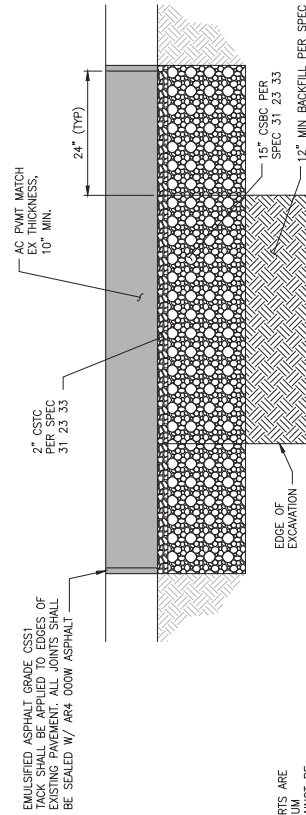
4 COLLAR DETAIL

SCALF: NTS



UNDERGROUND UTILITY SUPPORT DETAIL

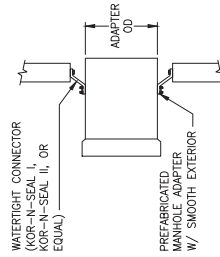
SCAF-NTS



- NOTES:**
1. REFER TO SPEC SECTION 32 12 16 FOR PAVEMENT MIX.
 2. EXISTING PAVEMENT THICKNESS VARIES.
 3. SAW CUT AND REPLACE PAVEMENT 2 FEET BEYOND EDGE OF EXCAVATION.

ASPHALT CONCRETE PAVEMENT DETAIL

SCALF: NTS



PIPE TO CONCRETE STRUCTURE CONNECTION DETAIL

SCALF: NTS

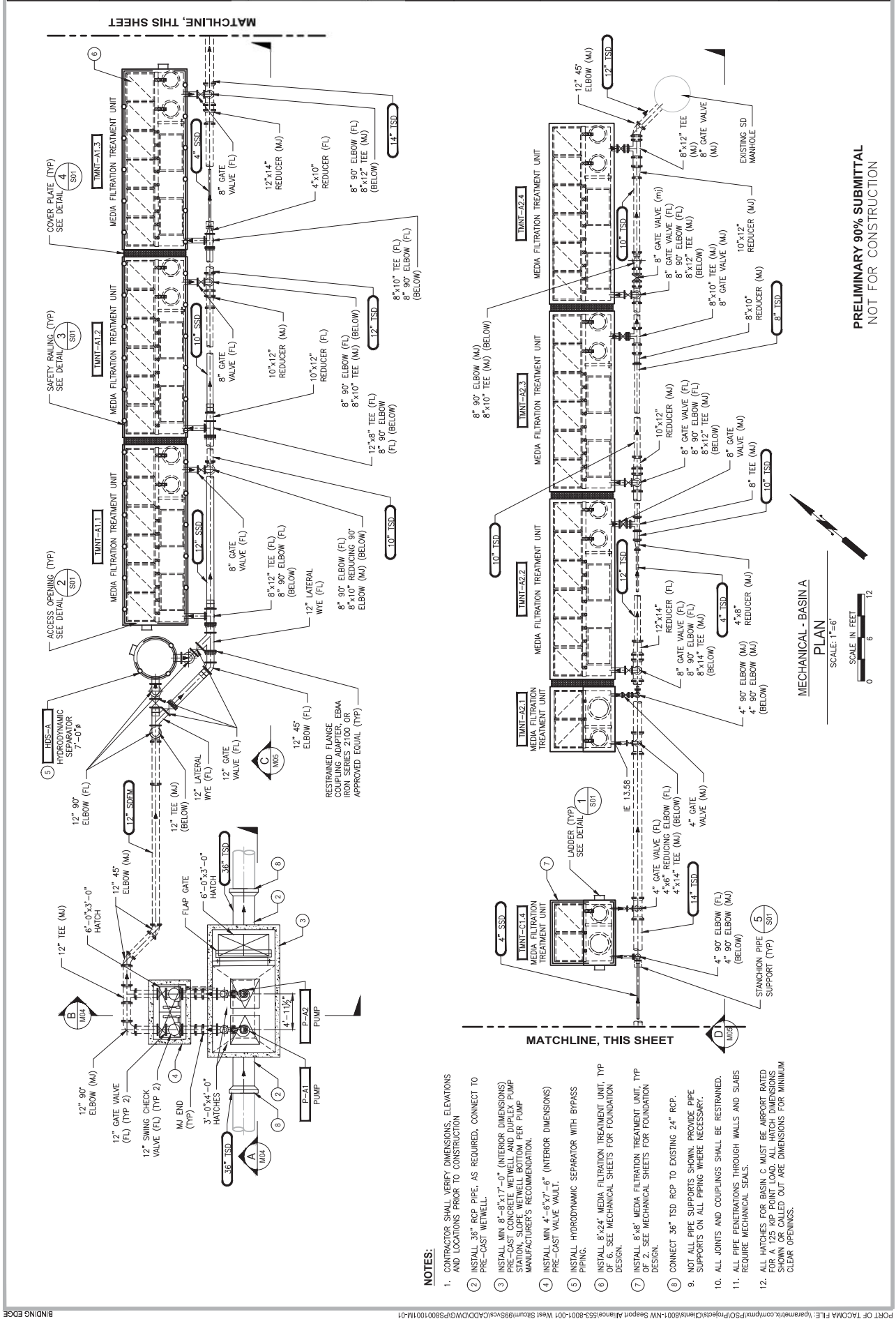
[illegible]



COVER PLATE DETAIL

SCALE: 1 1/2"=1'-0"

6583	M01	SH 18 OF 42	CONT/CONS: 070664	PHASE: 90%
DATE: 201024.01	DATE: 201024.01	DATE: 201024.01	DATE: 201024.01	DATE: 201024.01
PROJECT: SEE 002	PROJECT: SEE 002	PROJECT: SEE 002	PROJECT: SEE 002	PROJECT: SEE 002
TOWNSHIP: 21N	TOWNSHIP: 21N	TOWNSHIP: 21N	TOWNSHIP: 21N	TOWNSHIP: 21N
RANGE: 3E	RANGE: 3E	RANGE: 3E	RANGE: 3E	RANGE: 3E
SECTION: 33 & 34	SECTION: 33 & 34	SECTION: 33 & 34	SECTION: 33 & 34	SECTION: 33 & 34
VERT: MLW	VERT: MLW	VERT: MLW	VERT: MLW	VERT: MLW
PRINTED BY: anderson Feb 01, 2018	PRINTED BY: anderson Feb 01, 2018	PRINTED BY: anderson Feb 01, 2018	PRINTED BY: anderson Feb 01, 2018	PRINTED BY: anderson Feb 01, 2018
PORT ADDRESS: ONE SITCUM PLAZA	PORT ADDRESS: ONE SITCUM PLAZA	PORT ADDRESS: ONE SITCUM PLAZA	PORT ADDRESS: ONE SITCUM PLAZA	PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837	TACOMA, WA 98401-1837	TACOMA, WA 98401-1837	TACOMA, WA 98401-1837	TACOMA, WA 98401-1837
DIRECTOR ENG. DATE	DIRECTOR ENG. DATE	DIRECTOR ENG. DATE	DIRECTOR ENG. DATE	DIRECTOR ENG. DATE
CHECKED BY DATE	CHECKED BY DATE	CHECKED BY DATE	CHECKED BY DATE	CHECKED BY DATE
APPROVED:	APPROVED:	APPROVED:	APPROVED:	APPROVED:

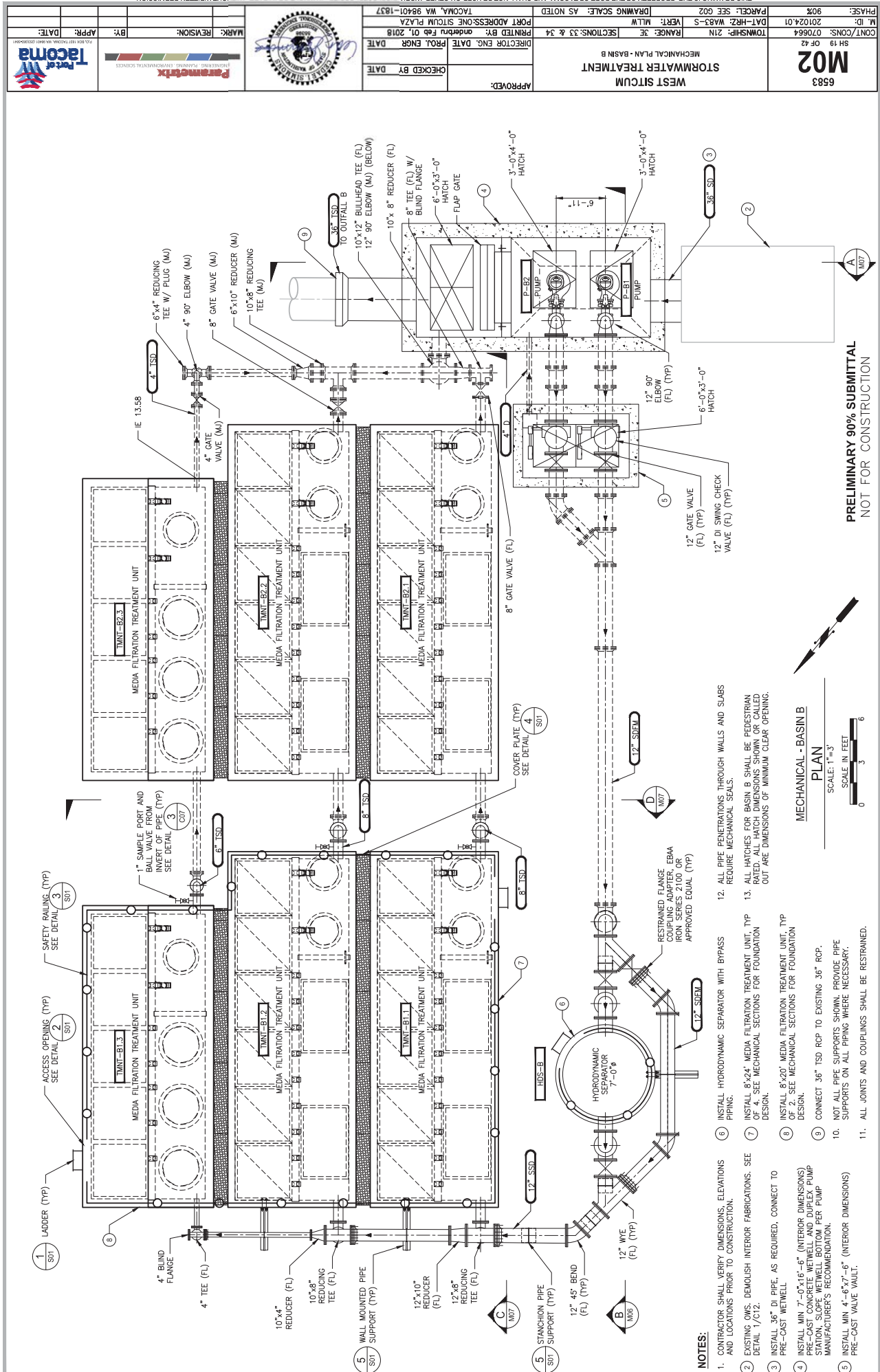


PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

MECHANICAL - BASIN A
PLAN
SCALE: 1"=6'
0 6 12
SCALE IN FEET

NOTES:

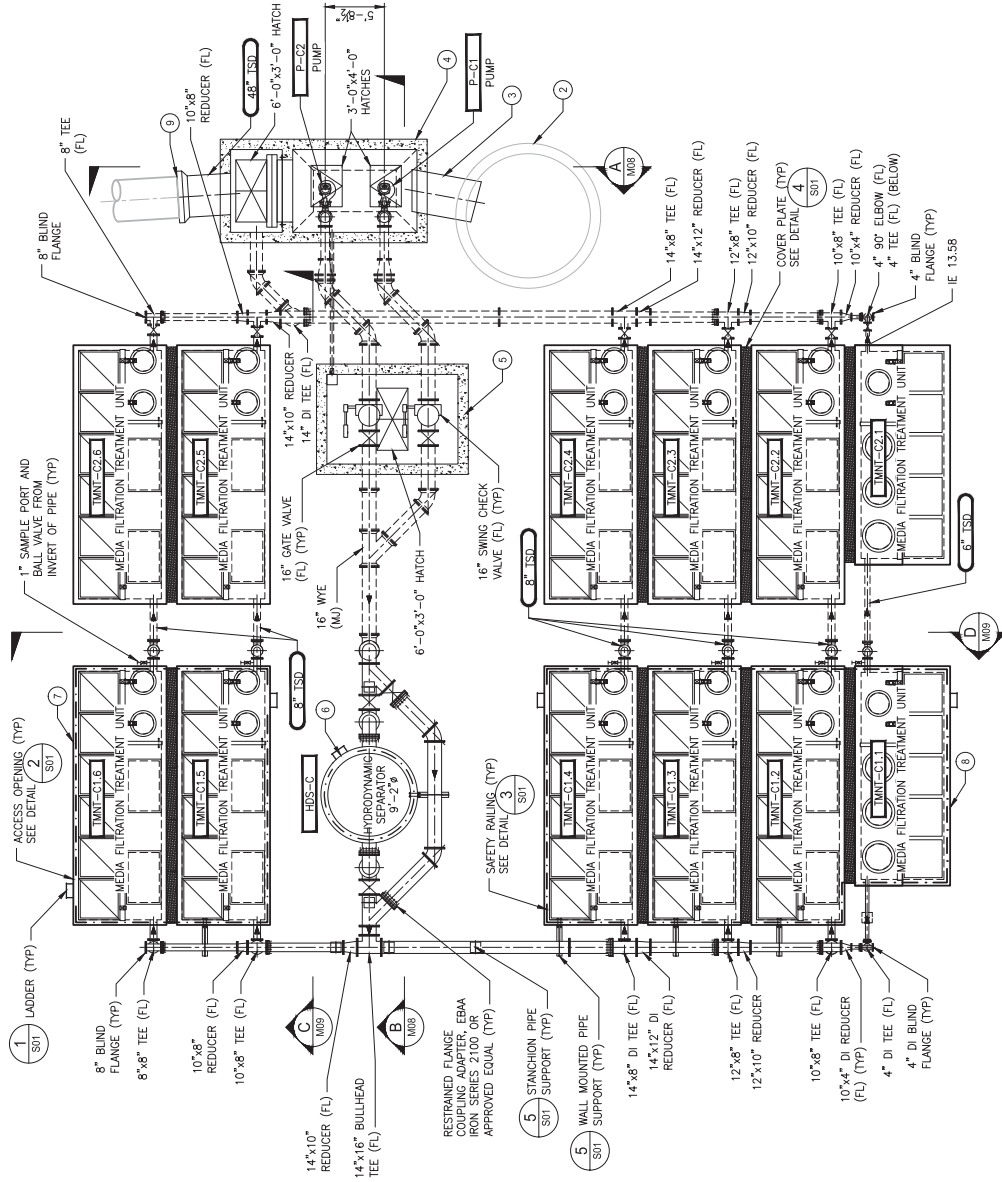
- CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
- INSTALL 36" RCP PIPE, AS REQUIRED, CONNECT TO PRE-CAST WETWELL.
- INSTALL MIN 8'-8"x17'-0" (INTERIOR DIMENSIONS) PRE-CAST CONCRETE WETWELL AND DUPLEX PUMP STATION, SLOPE WETWELL BOTTOM PER PUMP MANUFACTURER'S RECOMMENDATION.
- INSTALL MIN 4'-6"x7'-6" (INTERIOR DIMENSIONS) PRE-CAST VALVE VAULT.
- INSTALL HYDRODYNAMIC SEPARATOR WITH BYPASS PIPING.
- INSTALL 8"x4" MEDIA FILTRATION TREATMENT UNIT, TYP OF 6. SEE MECHANICAL SHEETS FOR FOUNDATION DESIGN.
- INSTALL 8"x4" MEDIA FILTRATION TREATMENT UNIT, TYP OF 2. SEE MECHANICAL SHEETS FOR FOUNDATION DESIGN.
- CONNECT 36" TSD RCP TO EXISTING 24" RCP.
- NOT ALL PIPE SUPPORTS SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
- ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
- ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
- ALL HATCHES FOR BASIN C MUST BE APPROPRIATELY REINFORCED AND ALL HATCHES FOR MINIMUM CLEAR OPENINGS.



6583	M02	SH 19 OF 42
CONTRACT NO. 070664	TOWNSHIP: 21N	DATE: 2010/04/01
PHASE: 90%	PARCEL: SEE G02	DRAWING SCALE: AS NOTED
	VERT: MLLW	SECTION: 33 & 34
	PRINTED BY: andrea@port-tacoma.org	DATE: 01/01/2018
	DIRECTOR ENG. DATE	PROJ. ENGR DATE
	CHECKED BY DATE	APPROVED:
		TACOMA, WA 98401-1837
		PORT ADDRESS: ONE SITCUM PLAZA
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NOTES:

1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION
2. EXISTING OWS. DEMOLISH INTERIOR FABRICATIONS. SEE DETAIL 2/C12.
3. INSTALL 48" DI PIPE, AS REQUIRED, CONNECT TO PRE-CAST WETWELL.
4. INSTALL MIN 8'-0"x18'-0" (INTERIOR DIMENSIONS) PRE-CAST CONCRETE WETWELL AND DUPLEX PUMP STATION, SLOPE WETWELL BOTTOM PER PUMP MANUFACTURER'S RECOMMENDATION.
5. INSTALL MIN 8'-8"x12'-8" (INTERIOR DIMENSIONS) PRE-CAST VALVE VAULT.
6. INSTALL HYDRODYNAMIC SEPARATOR WITH BYPASS PIPING.
7. INSTALL 8'x24' MEDIA FILTRATION TREATMENT UNIT, TYP OF 10. SEE STRUCTURAL SHEETS FOR FOUNDATION DESIGN.
8. INSTALL 8'x20' MEDIA FILTRATION TREATMENT UNIT, TYP OF 2. SEE STRUCTURAL SHEETS FOR FOUNDATION DESIGN.
9. CONNECT 48" TSD RCP TO EXISTING 48" RCP.
10. NOT ALL PIPE SUPPORTS SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
11. ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
12. ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
13. ALL HATCHES FOR BASIN C MUST BE SUPPORT RATED FOR A DECKUP POINT LOAD. ALL HATCH DIMENSIONS SHOWN OR CALLED OUT ARE DIMENSIONS FOR MINIMUM CLEAR OPENINGS.



MECHANICAL - BASIN C
PLAN
SCALE: 1"=6'
SCALE IN FEET
0 6 12

PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

6583	M03	SH 20 OF 42	CONTRACT/CONS: 070664	M. ID: 201024.01	PHASE: 90%
TOWNSHIP: 21N					
RANGE: 3E					
SECTION: 33 & 34					
VERT: MLW					
DRAWING SCALE: AS NOTED					
TACOMA, WA 98401-1837					
PORT ADDRESS: ONE SITCUM PLAZA					
PRINTED BY: andrea Feb 01, 2018					
DIRECTOR ENG. DATE					
PROJ. ENGR DATE					
CHECKED BY DATE					
APPROVED:					
WEST SITCUM					
STORMWATER TREATMENT					
MECHANICAL PLAN - BASIN C					
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MARRK: REVISION: BY: APPR: DATE:					
PARAMETRIX					
TACOMA, WA 98401-1837					
PORT OF TACOMA FILE: \\parametrix.com\pm\p\SO\Projects\Clients\8001-NW Seaport Alliance\553-8001-001 West Sluicum\98595\CA\DWG\PS8001001M-03					

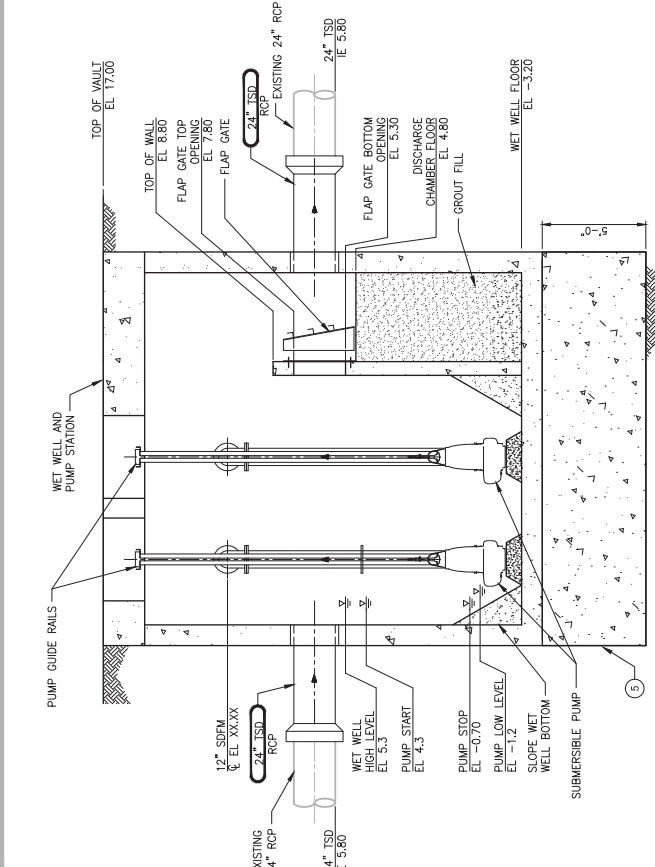
6583		SH 21 OF 42	M04
CONTRACT/CONS:	070664	M ID:	201024.01
PHASE:	90%	PARCEL:	SEE G02
TOWNSHIP:	21N	RANGE:	3E
SECTIONS:	33 & 34	VERT:	MLW
DRAWING SCALE:	AS NOTED	PRINTED BY:	andrea Feb 01, 2018
PORT ADDRESS:	ONE SITCUM PLAZA	TACOMA, WA	98401-1837
DIRECTOR ENG. DATE	PROJ. ENR DATE	CHECKED BY DATE	APPROVED:
MECHANICAL SECTION - BASIN A			
WEST SITCUM STORMWATER TREATMENT			

MARK:	REVISION:	BY:	APPR:	DATE:
Parametrix				
TACOMA				

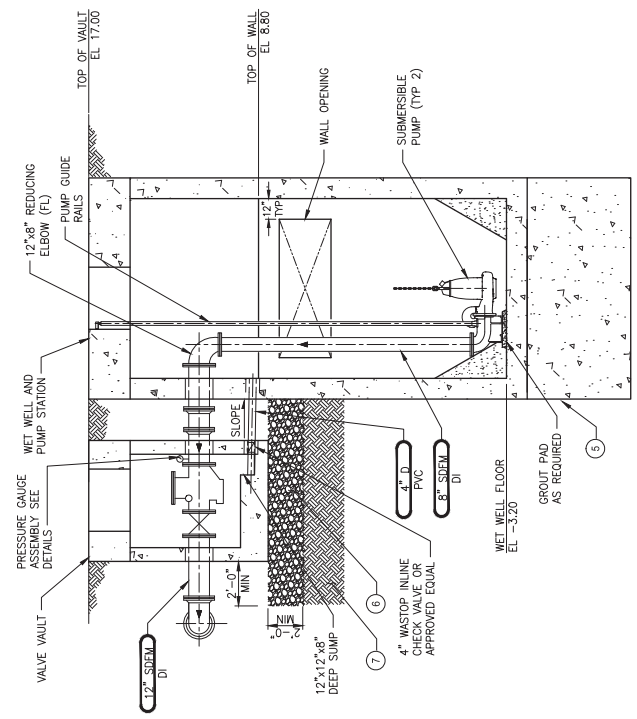


NOTES:

1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
2. PIPE SUPPORTS NOT SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
3. ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
4. ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
5. MUD SLAB, SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
6. CSFG. SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
7. SCARIFY 2' OF EXISTING MATERIAL AND RECOMPACT TO 95% MAX DRY DENSITY.

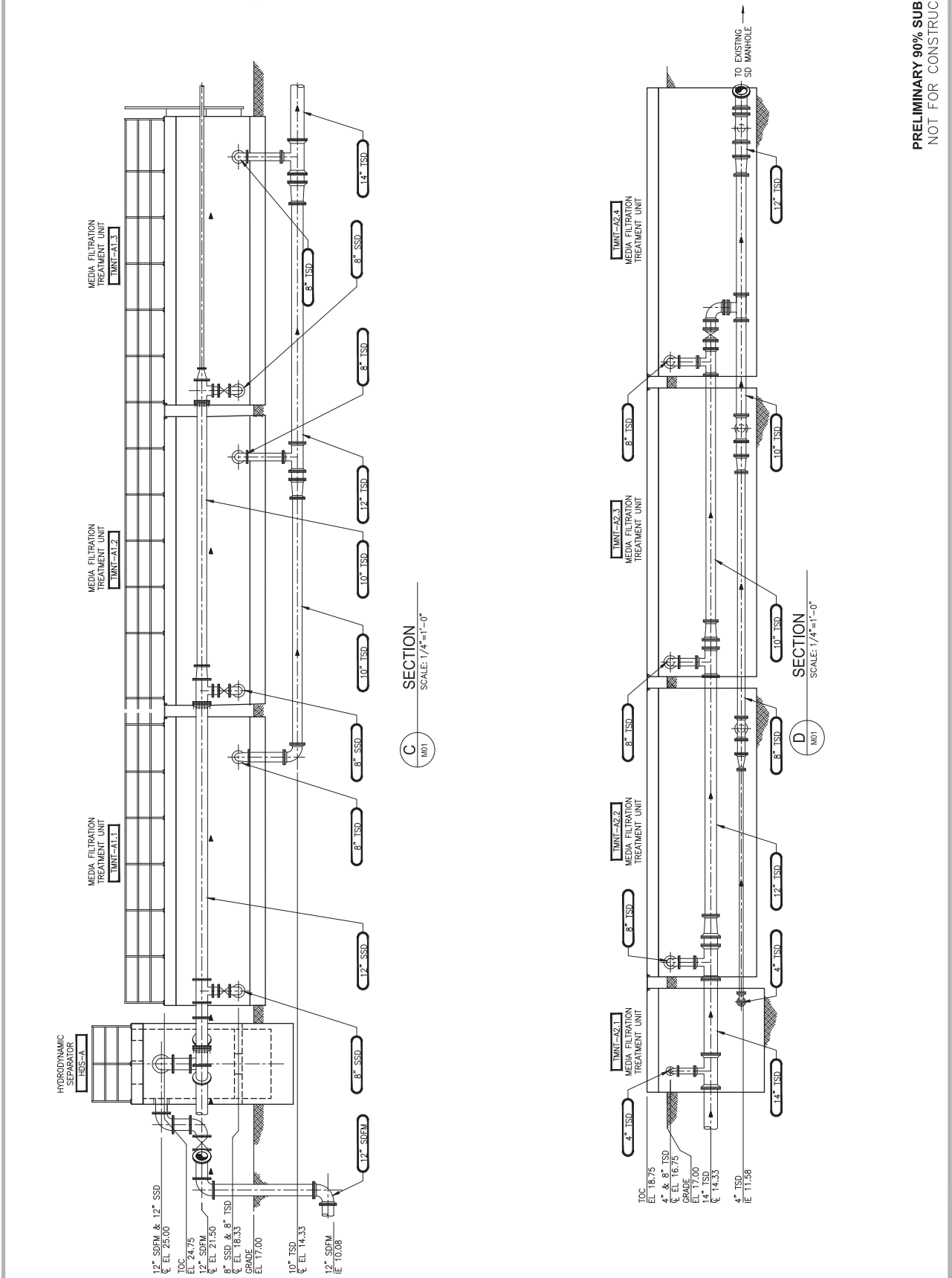


A SECTION
SCALE: 1"=3'



B SECTION
SCALE: 1"=3'

PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION



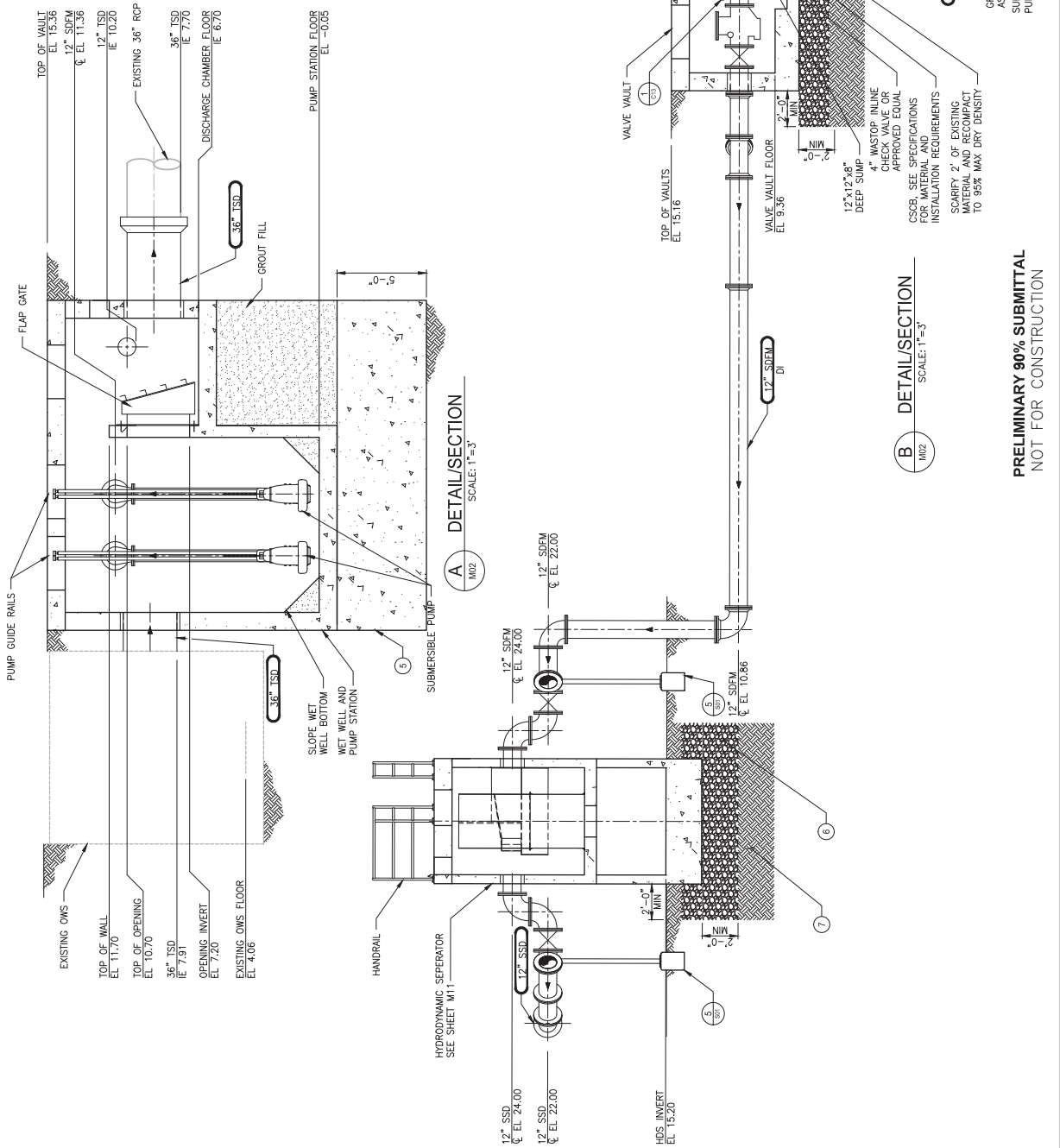
PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

6583		SH 22 OF 42	M05
CONTRACT/CONS: 070664	TOWNSHIP: 21N	RANGE: 3E	SECTIONS: 33 & 34
DATE-HRZ: WA83-S	M. ID: 201024.01	PARCEL: SEE 002	DRAWING SCALE: AS NOTED
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APPROVED: [Signature]			
DIRECTOR ENG. DATE			
PROJ. ENGR DATE			
CHECKED BY DATE			
PRINTED BY: andrew Feb 01, 2018			
PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837			
MARK: [Signature]			
REVISION: [Signature]			
BY: [Signature]			
APPR. DATE: [Signature]			
[Logo: Port of Tacoma]			
[Logo: Parametrix]			

6583	M06	SH 31 OF 42	CONT./CONS: 070664	M. ID: 201024.01	PHASE: 90%
TOWNSHIP: 21N RANGE: 3E SECTIONS: 33 & 34					
VERT: MLLW					
DRAWING SCALE: AS NOTED					
TACOMA, WA 98401-1837					
PRINTED BY: andrew Feb 01, 2018					
PORT ADDRESS: ONE SITUUM PLAZA					
DIRECTOR ENG. DATE					
PROJ. ENGR DATE					
CHECKED BY DATE					
APPROVED:					
MECHANICAL SECTION - BASIN B					
STORMWATER TREATMENT					
WEST SITUUM					

NOTES:

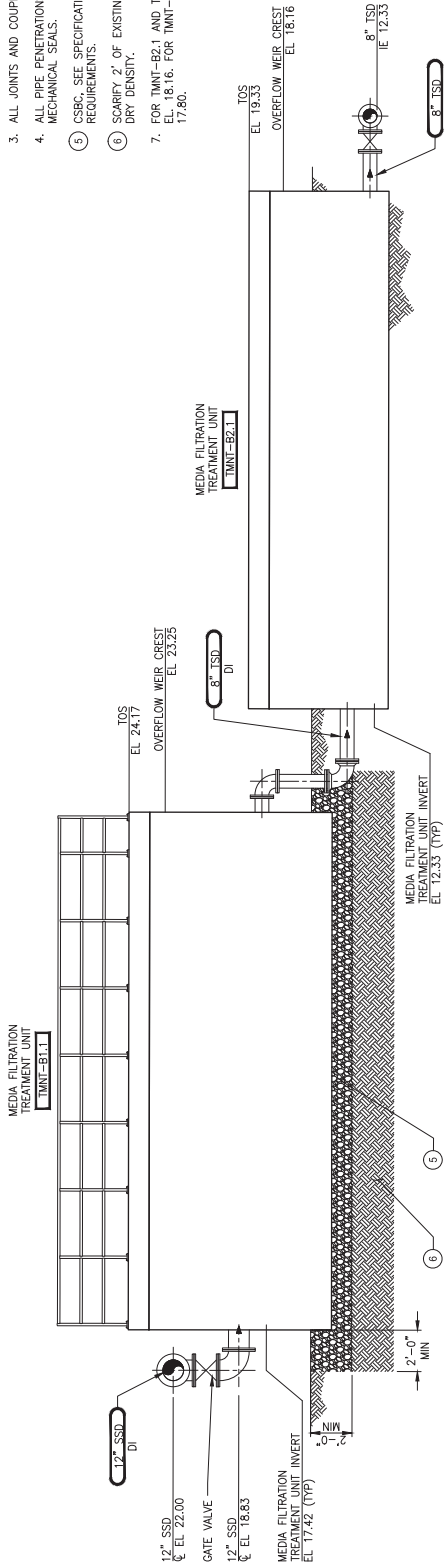
1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
2. NOT ALL PIPE SUPPORTS SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
3. ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
4. ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
5. MUD SLAB, SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
6. CSBG, SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
7. SCARIFY 2" OF EXISTING MATERIAL AND RECOMPACT TO 95% MAX DRY DENSITY.
8. BASIS OF DESIGN PUMP REQUIRES A CLEARANCE OF 9' 7/8" BETWEEN THE WET WELL FLOOR AND THE PUMP INTAKE. FOR EACH INCH OR FRACTION OF AN INCH OF ADDITIONAL CLEARANCE REQUIRED BY THE PROVIDED PUMP, THE PUMP STATION SYSTEM SUPPLIER SHALL INCREASE THE DEPTH OF THE WET WELL BY AN INCH.
9. BASIS OF DESIGN PUMP REQUIRES A MINIMUM SUBMERGED LEVEL OF 24" TO AVOID DAMAGE TO THE PUMP. FOR EACH INCH OR FRACTION OF AN INCH OF ADDITIONAL CLEARANCE REQUIRED BY THE PROVIDED PUMP, THE PUMP STATION SYSTEM SUPPLIER SHALL INCREASE THE DEPTH OF THE WET WELL BY AN INCH.



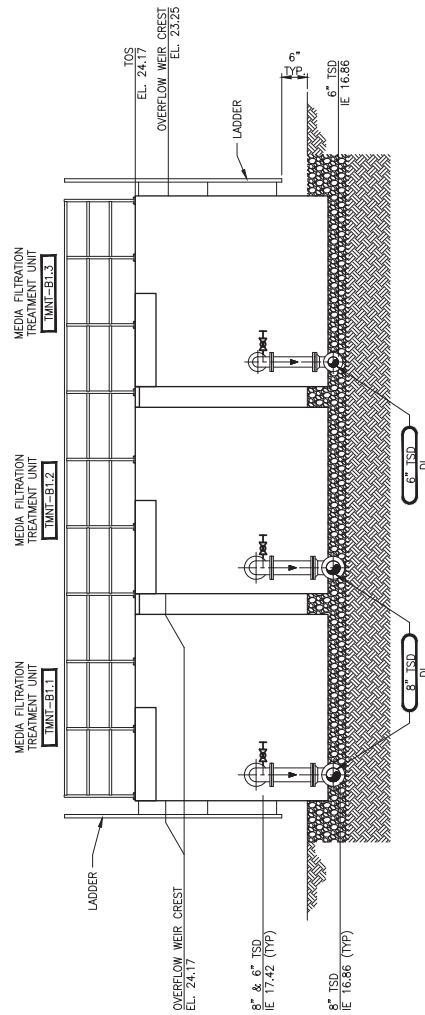
PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

NOTES:

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2. PIPE SUPPORTS NOT SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
3. ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
4. ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
5. CSBIC. SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
6. SCARIFY 2' OF EXISTING MATERIAL AND RECOMPACT TO 95% MAX DRY DENSITY.
7. FOR TUNT-B2.1 AND TUNT-B2.2 OVERFLOW WEIR CREST IS AT EL. 18.16. FOR TUNT-B2.3 OVERFLOW WEIR CREST IS AT EL. 17.80.



C DETAIL/SECTION
SCALE: 1"=3'



D DETAIL/SECTION
SCALE: 1"=3'

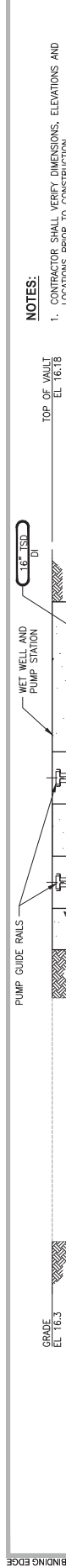
PRELIMINARY 90% SUBMITTAL
NOT FOR CONSTRUCTION

6583		M07		SH 24 OF 42	
CONTRACT/CONS: 070664		TOWNSHIP: 21N		RANGE: 3E	
M. ID: 201024.01		DATE-HRZ: WA83-S		VERT: MLW	
PHASE: 90%		DRAWING SCALE: AS NOTED		TACOMA, WA 98401-1837	
PRINTED BY: andrew.feb.01.2018		DIRECTOR ENG. DATE		PROJ. ENGR DATE	
CHECKED BY DATE		APPROVED:		STORMWATER TREATMENT WEST SITCUM MECHANICAL SECTION - BASIN B	

PARAMETRIX		TACOMA		DATE:	
BY:		APPR:		DATE:	



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1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
2. NOT ALL PIPE SUPPORTS SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
3. ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
4. ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
5. MUD SLAB, SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
6. CSBSC, SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
7. SCARIFY 2" OF EXISTING MATERIAL AND RECOMPACT TO 95% MAX DRY DENSITY.
8. BASIS OF DESIGN PUMP REQUIRE A CLEARANCE OF 9.7/8" BETWEEN THE WET PUMP FLOOR AND THE PUMP INTAKE, FOR EACH INCH OR FRACTION OF AN INCH OF ADDITIONAL CLEARANCE REQUIRED BY THE PROVIDED PUMP. THE PUMP STATION SYSTEM SUPPLIER SHALL INCREASE THE DEPTH OF THE WET WELL BY AN INCH.
9. BASIS OF DESIGN PUMP REQUIRE A MINIMUM SUBMERGED LEVEL OF 24" TO AVOID DAMAGE TO THE PUMP. FOR EACH INCH OR FRACTION OF AN INCH OF ADDITIONAL SUBMERGENCE REQUIRED BY THE PROVIDED PUMP, THE PUMP STATION SYSTEM SUPPLIER SHALL INCREASE THE DEPTH OF THE WET WELL BY AN INCH.



STORMWATER TREATMENT		MECHANICAL SECTION - BASIN C		TOWNSHIP: 21N RANGE: 3E SECTION: 33 & 34 T1W VERT: 1/4 DRAWING SCALE: AS NOTED	
WEST SITCOM		APPROVED:		PROJECT: WABJ-S DRAWING: SEC 002 TACOMA, WA 98401-1837	
CHECKED BY: DATE:	DIRECTOR ENG. DATE: PROJ. ENGR DATE:	PRINTED BY: PRINTED: Feb 01, 2016 PORT ADDRESS: ONE SITCOM PLAZA			

6583
M08
SH # OF 42
CONT/CONS: 070664
M. ID: 201024.01
PHASE: 90%



1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
2. PIPE SUPPORTS NOT SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
3. ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
4. ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MECHANICAL SEALS.
5. CSBRC SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
6. SCARIFY 2" OF EXISTING MATERIAL AND RECOMPACT TO 95% MAX DRY DENSITY.

SCALE: 1"=3'

SCALE: 1"=3'

NOT FOR CONSTRUCTION