



Procurement Services Division
Public Services Building
2051 Kaen Road
Oregon City, OR 97045
(503) 742-5444 (Office)

**REQUEST FOR QUOTES (RFQ) #2016-11 OptiRTC SITE
INSTRUMENT AND INSTALLATION PROJECT**

Issue Date: September 27, 2016

Project Name:	OptiRTC Site Instrument and Installation Project		
Quote Due Date/Time:	October 11 th 2016/ 4:00pm		
Mandatory Walkthrough:	October 3rd, 10:00am Location: 13944 SE Hines Dr., Clackamas OR 97015		
Project Coordinator	Leah Johanson	Phone:	503-742-4620
		Email:	LJohanson@co.clackamas.or.us
Buyer: Ryan Rice		Phone:	503-742-5446
		Email:	rrice@clackamas.us

**SUBMIT QUOTES VIA EMAIL TO PROCUREMENT@CLACKAMAS.US
OR MAIL/HAND DELIVERY TO THE ABOVE ADDRESS**

**PLEASE NOTE: EMAIL SUBMISSIONS SHOULD HAVE
“2016-11 OptiRTC SITE INSTRUMENT AND INSTALLATION PROJECT” IN THE
SUBJECT LINE**

1. ANNOUNCEMENT AND SPECIAL INFORMATION

Quoters are required to read and understand and comply with all information contained within this Request for Quotes (“RFQ”). All quotes are binding upon Quoter for sixty (60) days from the Quote Due Date/Time. Quotes received after the Quote Due Date/Time may not be considered. If authorized in the RFQ and resulting contract, travel and other expense reimbursement will only be reimbursed in accordance with the Clackamas County travel reimbursement policy at the time the expense is incurred.

It will be the responsibility of potential Quoters to refer daily to the Bids and Contract Information Page (www.clackamas.us/bids/index.html) to check for any available addenda, response to clarifying questions, cancellations or other information pertaining to this RFQ.

2. SCOPE

The purpose of this RFQ is for the services to complete weir wall modifications, equipment installation, and electrical work in three (3) detention ponds within the District. Major focus will be on installation of District provided OptiRTC equipment.

Attendance at a Mandatory Pre-Quote Walkthrough is required to be eligible to quote on this opportunity. The Mandatory Pre-Quote Walkthrough will be conducted at 13944 SE Hines Dr., Clackamas OR 97015 on Monday October 3rd, 2016 at 10:00 AM. Attendance will be documented through a sign-in sheet.

Prevailing Wage Rates requirements apply to this project because the maximum compensation for all owner-contracted work is more than \$50,000. The selected contractor and all subcontractors shall comply with the provision of ORS 279C.800 through 279C.870, relative to the Prevailing Wage Rates and the required public works bond.

PREVAILING WAGE RATES for Public Works Contracts in Oregon, July 1, 2016, as amended on August 09, 2016 which can be downloaded at the following web address: http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx. The Work will take place in Clackamas County, Oregon.

Delivery – Choose one of the following:

- Delivery required within _____ days of supplier's receipt of order.
- Substantial Completion as of November 15, 2016 with a Final Completion November 30, 2016.
- Delivery time is of the essence and may be a factor in making an award.

3. Quote

Quotes should be short and concise with the following information:

- A. Company experience in these types of projects;
- B. Not-to-exceed price to complete the project;
- C. Estimated time to complete the project; and
- D. Any additional information that Clackamas County should take into consideration for the project or qualifications.

4. Evaluation

The quote received by the lowest responsive responsible Quoter will be awarded a contract. The "lowest responsive responsible Quoter" is the lowest Quoter who has substantially complied with all requirements of the Request for Quote and who can be expected to deliver promptly and perform reliably.

CLACKAMAS COUNTY CERTIFICATIONS
RFQ #2016-11 OptiRTC SITE INSTRUMENT AND INSTALLATION PROJECT

Each Quoter must read, complete and submit a copy of this Clackamas County Certification with their Quote. Failure to do so may result in rejection of Quote. By signature on this Certification the undersigned certifies that they are authorized to act on behalf of the Quoter and that under penalty of perjury the undersigned will comply with the following:

SECTION I. OREGON TAX LAWS

As required in ORS 305.385(6), the undersigned hereby certifies that to the best of the undersigned's knowledge, the Quoter is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means a state tax imposed by ORS 320.005 to 320.150 and 403.200 to 403.250 and ORS chapters 118, 314, 316, 317, 318, 321, 323, and elderly rental assistance program under ORS 310.630 to 310.706, or and local taxes administered by the Department of Revenue under ORS 305.620. If a contract is executed, this information will be reported to the Internal Revenue Service. Information not matching IRS records could subject Quoter to 28% backup withholding.

SECTION II. NON-DISCRIMINATION

The undersigned hereby certifies that the Quoter has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, gender identity, national origin, or any other protected class. Nor has Quoter or will Quoter discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emergency small business that is certified under ORS 200.055.

SECTION III. CONFLICT OF INTEREST

The undersigned hereby certifies that no Commissioner, officer, agency or employee of Clackamas County is personally interested directly or indirectly in any resulting contract from this RFQ, or the compensation to be paid under such contract, and that no representation, statements (oral or in writing), of the County, its Commissioners, officers, agents, or employees had induced Quoter to submit this Quote. In addition, the undersigned hereby certifies that this proposal is made without connection with any person, firm, or corporation submitting a quote for the same material, and is in all respects fair and without collusion or fraud.

SECTION IV. COMPLIANCE WITH SOLICITATION

The undersigned further agrees and certifies that they:

1. Have read, understand and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions of the RFQ (including any attachments); and
2. Are an authorized representative of the Quoter, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Quote or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the RFQ and Quote; and
4. Will use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this RFQ.

Firm Name: _____ Date: _____

Signature: _____ Title: _____

Name: _____ Telephone: _____

Email: _____ OR CCB # (if applicable): _____

Business Designation (check one):

Corporation Partnership Sole Proprietorship Non-Profit Limited Liability Company

Resident Quoter, as defined in ORS 279A.120

Non-Resident Quote. Resident State: _____

Oregon Business Registry Number: _____

**CLACKAMAS COUNTY
INSTRUCTIONS TO QUOTERS**

Quotes are subject to the applicable provisions and requirements of the Clackamas County Local Contract Review Board Rule C-047-0270 (Intermediate Procurements) and Oregon Revised Statutes.

QUOTE PREPARATION

1. **QUOTE FORMAT:** Quotes must be submitted as indicated in the RFQ. Quotes may be submitted in writing to Clackamas County via e-mail, mail or in person.
2. **CONFORMANCE TO RFQ REQUIREMENTS:** Quotes must conform to the requirements of the RFQ. Unless otherwise specified, all items quoted are to be new, unused and not remanufactured in any way. Any requested attachments must be submitted with the quote and in the required format. Quote prices must be for the unit indicated on the quote. Failure to comply with all requirements may result in quote rejection.
3. **ADDENDA:** Only documents issued as addenda by Clackamas County serve to change the RFQ in any way. No other directions received by the Quoter, written or verbal, serve to change the RFQ document. NOTE: IF YOU HAVE RECEIVED A COPY OF THE RFQ, YOU SHOULD CONSULT THE CLACKAMAS COUNTY BIDS AND CONTRACT INFORMATION WEBSITE (www.clackamas.us/bids/index.html) TO ENSURE THAT YOU HAVE NOT MISSED ANY ADDENDA OR ANNOUNCEMENTS. QUOTERS ARE NOT REQUIRED TO RETURN ADDENDUMS WITH THEIR QUOTE. HOWEVER, QUOTERS ARE RESPONSIBLE TO MAKE THEMSELVES AWARE OF, OBTAIN AND INCORPORATE ANY CHANGES MADE IN ANY ADDENDA ISSUED, AND TO INCORPORATE ANY CHANGES MADE BY ADDENDUM INTO THEIR FINAL QUOTE. FAILURE TO DO SO MAY, IN EFFECT, MAKE THE QUOTER'S QUOTE NON-RESPONSIVE, WHICH MAY CAUSE THE QUOTE TO BE REJECTED.
4. **USE of BRAND or TRADE NAMES:** Any brand or trade names used by Clackamas County in the specifications are for the purpose of describing and establishing the standard of quality, performance and characteristics desired and are not intended to limit or restrict competition. Quoters may submit quotes for substantially equivalent products to those designated unless the RFQ provides that a specific brand is necessary because of compatibility requirements, etc. All such brand substitutions shall be subject to approval by Clackamas County.
5. **PRODUCT IDENTIFICATION:** Quoters must clearly identify all products quoted. Brand name and model or number must be shown. Clackamas County reserves the right to reject any quote when the product information submitted with the quote is incomplete.
6. **FOB DESTINATION:** Unless specifically allowed in the RFQ, ***QUOTE PRICE MUST BE F.O.B. DESTINATION with all transportation and handling charges included in the Quote.***
7. **DELIVERY:** Delivery time must be shown in number of calendar days after receipt of purchase order.
8. **EXCEPTIONS:** Any deviation from quote specifications, or the Clackamas County Materials and Services Contract may result in quote rejection.
9. **SIGNATURE ON QUOTE:** Quotes must be signed by an authorized representative of the Quoter. Signature on a quote certifies that the quote is made without connection with any person, firm or corporation making a quote for the same goods and/or services and is in all respects fair and without collusion or fraud. Signature on a quote also certifies that the Quoter has read and fully understands all quote specifications, and the Clackamas County Materials and Services Contract (including insurance requirements). No consideration will be given to any claim resulting from quoting without comprehending all requirements of the RFQ.
10. **QUOTE MODIFICATION:** Quotes, once submitted, may be modified in writing before the time and date set for quote closing. Any modifications should be signed by an authorized representative, and state that the new document supersedes or modifies the prior quote. Quoters may not modify quotes after quote closing time.
11. **QUOTE WITHDRAWALS:** Quotes may be withdrawn by request in writing signed by an authorized representative and received by Clackamas County prior to the Quote Due Date/Time.

Quotes may also be withdrawn in person before the Quote Due Date/Time upon presentation of appropriate identification.

- 12. QUOTE SUBMISSION:** Quotes may be submitted by returning to Clackamas County Procurement Services Division in the location designated in the introduction of the RFQ via email, mail or in person; however, no oral or telephone quotes will be accepted. Envelopes, or e-mails containing Quotes should contain the RFQ Number and RFQ Title.

QUOTE EVALUATION AND AWARD

- 1. PRIOR ACCEPTANCE OF DEFECTIVE PROPOSALS:** Due to limited resources, Clackamas County generally will not completely review or analyze quotes which fail to comply with the requirements of the RFQ or which clearly are not the best quotes, nor will Clackamas County generally investigate the references or qualifications of those who submit such quotes. Therefore, neither the return of a quote, nor acknowledgment that the selection is complete shall operate as a representation by Clackamas County that an unsuccessful quote was complete, sufficient, or lawful in any respect.
- 2. DELIVERY:** Significant delays in delivery may be considered in determining award if early delivery is required.
- 3. CASH DISCOUNTS:** Cash discounts will not be considered for award purposes unless stated in the RFQ.
- 4. PAYMENT:** Quotes which require payment in less than 30 days after receipt of invoice or delivery of goods, whichever is later, may be rejected.
- 5. INVESTIGATION OF REFERENCES:** Clackamas County reserves the right to investigate references and or the past performance of any Quoter with respect to its successful performance of similar services, compliance with specifications and contractual obligations, and its lawful payment of suppliers, sub-contractors, and workers. Clackamas County may postpone the award or execution of the contract after the announcement of the apparent successful Quoter in order to complete its investigation. Clackamas County reserves the right to reject any quote or to reject all quotes at any time prior to Clackamas County's execution of a contract if it is determined to be in the best interest of Clackamas County to do so.
- 6. METHOD OF AWARD:** Clackamas County reserves the right to make the award by item, groups of items or entire quote, whichever is in the best interest of Clackamas County.
- 7. QUOTE REJECTION:** Clackamas County reserves the right to reject any and all quotes.
- 8. QUOTE RESULTS:** Quoters who submit a quote will be notified of the RFQ results. Awarded quote files are public records and available for review by submitting a public records request or by appointment.

Detailed Scope of Work
OptiRTC SITE INSTRUMENT AND INSTALLATION PROJECT

Introduction

Water Environment Services (WES), on behalf of Clackamas County Service District #1 (District), is seeking quotes to install OptiRTC equipment into three (3) regional detention ponds within the District.

Background

The District is completing a pilot project using OptiRTC (“Opti”) technology. The District needs to address flooding and performance at several large regional stormwater ponds. As an alternative to completing expensive retrofit construction projects the District will be installing this emerging ‘continuous monitoring and active control’ technology.

Opti is a flexible platform that provides real-time continuous monitoring and adaptive control services for stormwater systems. Specifically, Opti’s OptiNimbus continuous monitoring and adaptive control services use data from connected on-site sensors, weather forecasts, and site specific parameters to make intelligent and predictive control decisions about when and at what rate water is discharged from stormwater infrastructure. This process of predictive control improves stormwater management performance and reduces costs to meet stormwater regulatory goals.

The Opti equipment will be installed in three existing stormwater management facilities:

Sunnyside Village Green:

The Sunnyside Village Green pond was designed and built in 2005. The pond is located near SE Hines Drive and SE 147th, in the City of Happy Valley, OR. The as-built drawings for the detention pond are included as Exhibit A. The detention pond receives stormwater from two storm lines, identified on the plans as “storm line A” and “storm line E”, which discharge into rip rap basins. The pond outlet is identified on the plans as “storm line D” which discharges into a flow control structure and drains into Sieben Creek.

Sub-Regional Pond A:

The Sub-Regional Detention Pond A was designed and built in 2003. The pond is located near 9885 SE Plover Dr. in the City of Happy Valley, OR. The as-built plans for the Sub-Regional Detention Pond are included as Exhibit A. The Sub-Regional Detention Pond A receives stormwater from one storm line, identified on the plan as “storm line L” and a swale, identified as “swale A” which discharge into a silt basin. The pond outlet has a flow control structure located in MH H-2 which discharges to “storm line H” and drains into a swale.

Sub-Regional Pond B:

The Sub-Regional Detention Pond B was designed and built in 2003. The pond is located near SE 145th and SE Callahan Rd. in the City of Happy Valley, OR. The as-built plans for the Sub-Regional Detention Pond are included as Exhibit A. The Sub-Regional Detention Pond receives stormwater from one storm line, identified on the plan as “storm line B” which discharge into a silt basin. The pond outlet identified on the plans as “storm line F” discharges into a flow control structure and drains into a wetland.

Since the original installation, the pond outlet structures have been retrofit with weir walls that will need to be removed and/or modified during this project. The following is summary of the scope of work anticipated for each detention pond installation. Exhibit A shows the conceptual plans for each site.

Scope of Work

Sub-Regional Detention Pond A

Major Installation Activities are described below and shown in Exhibit B.

Steps #1 and #2 require entry into and work within a 72" diameter manhole with a depth of 8'

1. Power Drop (1 day) - Contractor/Utility
 - a. Install 120V service at top of berm
2. Trash Rack Installation (0.5 day)
 - a. Install metal grate or trash rack on the inlet to the vault
3. Weir Wall Modifications (1 day)
 - a. Remove top panel of weir (2') and dispose of metal weir
 - b. Retrofit bottom panel of weir with 12" orifice and mounting plate
 - i. Cut 12" hole in steel weir wall next to the manual shear gate
 - ii. Install mounting plate to facilitate installation of butterfly valve
 - iii. Drill bolt hole pattern per the butterfly valve flange
 - c. Waterproof weir wall edges
 - i. Install compound on edges and seams of weir wall to ensure edges are water proofed
4. Equipment Installation (1 day)
 - a. Install 3-in galvanized pole in a 3-ft concrete footing near vault
 - b. Mount control panel on galvanized pole
 - c. Run two (2) electrical conduits from control panel to valve and actuator
 - i. One (1) for power and one (1) for signal wire
 - d. Install valve and actuator assembly on weir wall
 - i. Valve shall be bolted to the mounting plate at the base of the weir wall
 - ii. Valve stem shall be secured to the weir wall
 - e. Install stilling well and level sensor
 - i. Install a 2-in PVC stilling well on the upstream side of the weir wall
 - ii. Install level sensor instilling well
5. Electrical Installation (1 day)
 - a. Pull wire through conduit
 - b. Wire control panel to power per Opti Wiring Plans
 - c. Wire valve and level sensor to control panel per Opti Wiring Plans

Sub-Regional Detention Pond B

Major Installation Activities are described below on shown in Exhibit B.

Installation requires entry into and work within a 72" diameter manhole with a depth of 10'. Identical installation to Pond A except for the Weir Wall Modification task listed below:

1. Weir Wall Modifications (Approximately 1-2 day)
 - a. Remove weir from outfall completely
 - b. Remove top panel of weir (2') and dispose of metal weir
 - c. Retrofit bottom panel of weir with 12" orifice and mounting plate
 - i. Cut 12" hole in steel weir wall next to the manual shear gate
 - ii. Install mounting plate to facilitate installation of butterfly valve
 - iii. Drill bolt hole pattern per the butterfly valve flange
 - d. Reinstall weir wall at new orientation
 - e. Waterproof weir wall edges
 - i. Install compound on edges and seams of weir wall to ensure edges are water proofed

Sunnyside Detention Pond

Major Installation Activities

1. Installation requires entry into and work within a 72" diameter manhole with a depth of 10'.
2. Identical Installation to Sub-Regional Detention Pond A.

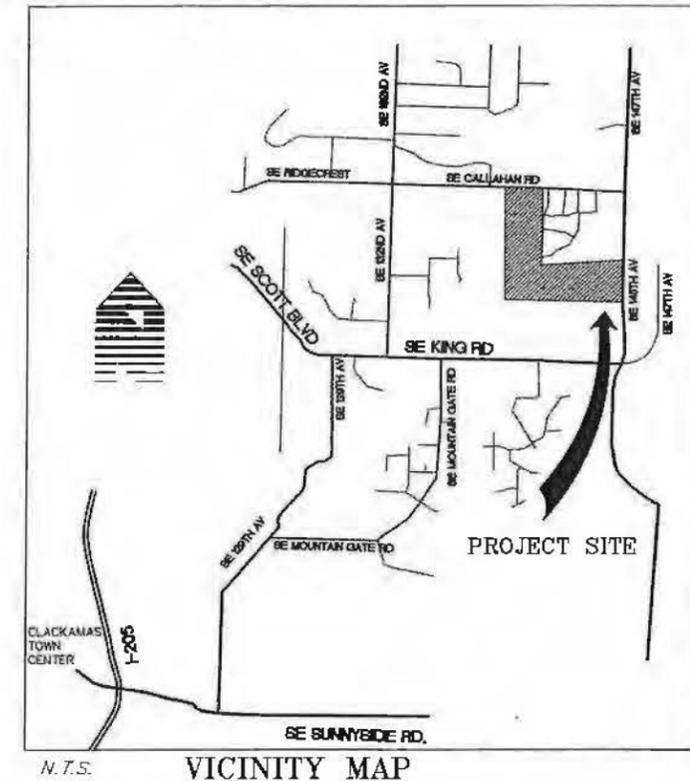
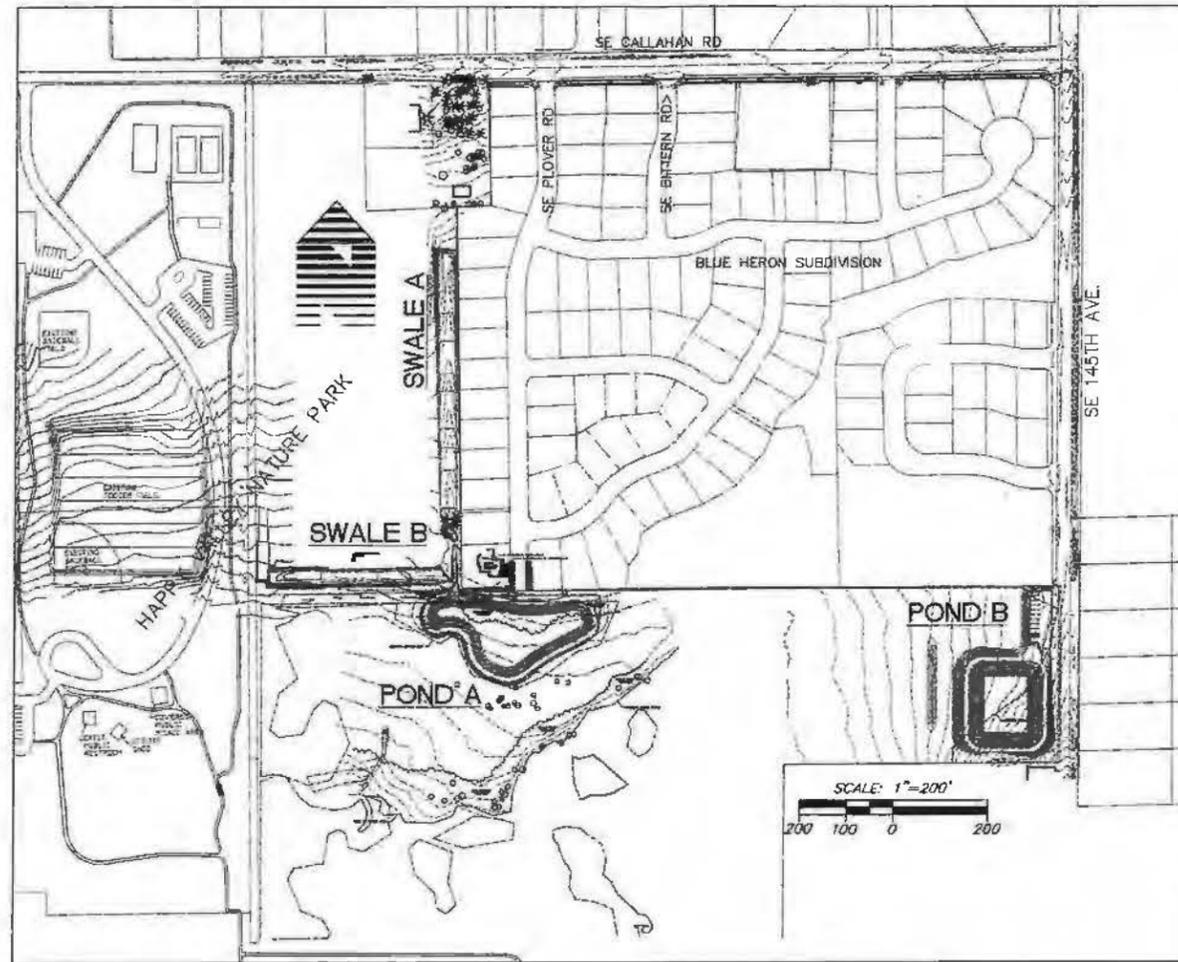
SUBREGIONAL DETENTION FACILITIES

LEGEND

EXISTING LEGEND		PROPOSED LEGEND	
	WATER METER		CURB
	MAIL BOX		CONCRETE SIDEWALK
	OVERHEAD ELECTRIC POWER		ROADWAY CENTERLINE
	UNDERGROUND TELEPHONE		RIGHT-OF-WAY
	GAS LINE		PROPOSED STORM
	WATER LINE		PROPOSED SANITARY
	SEWER LINE		PROPOSED WATER
	EXISTING FENCE		PROPOSED HYDRANT
	CONIFEROUS TREE		PROPOSED VALVE
	DECIDUOUS TREE		PROPOSED WATER SERVICE
	CATCH BASIN		PROPOSED CATCH BASIN
	STORM SEWER MANHOLE		PROPOSED STORM MANHOLE
	SANITARY SEWER MANHOLE		PROPOSED SANITARY MANHOLE
	GAS VALVE		PROPOSED BLOW OFF
	SPRINKLER VALVE		
	WATER VALVE		
	FIRE HYDRANT		
	STREET LIGHT		
	SIGN POST		
	TELEPHONE PEDESTAL		
	POWER PEDESTAL		
	TELEPHONE VAULT		
	EXISTING PAVEMENT		

CONTACT LIST:

- 1.) WATER ENVIRONMENT SERVICE, DEPT. OF CLACKAMAS CO. (OWNER) - JOHN CRAWER - 353-4569
- 2.) CLACKAMAS COUNTY (STORM SEWER) - MIKE NADRELLI - 353-4595
- 3.) CLACKAMAS COUNTY (SANITARY SEWER) - TIM FINLEY - 353-4575
- 4.) MT. SCOTT WATER DISTRICT - DARYL ZINSER - 761-0220
- 5.) CITY OF HAPPY VALLEY - BUD HOUSTON - 760-3325
- 6.) CITY OF HAPPY VALLEY - BILL SANDERS - 760-3325
- 7.) PORTLAND GENERAL ELECTRIC - RALPH GOINS - 669-5278
- 8.) PARAGON CABLE - AMANDA - 667-9390 x 229
- 9.) NORTHWEST NATURAL - JIM STOELTING - 220-2357
- 10.) QWEST - TIM WITKOWSKI - 503-249-5402



INDEX OF DRAWINGS

C000 COVER SHEET	C300 HALF STREET IMPROVEMENT PLAN PROFILE - 145TH
C100 EXISTING CONDITIONS - POND A	C400 STORM PLAN AND PROFILE - 145TH
C101 EXISTING CONDITIONS - POND B	C401 STORM PLAN AND PROFILE - 145TH
C102 EXISTING CONDITIONS - 145TH/CALLAHAN RD	C402 STORM PLAN AND PROFILE - CALLAHAN
C103 EXISTING CONDITIONS - CALLAHAN RD	C403 VISITOR PARKING LOT GRADING, PAVING AND DIMENSION PLAN
C104 EXISTING CONDITIONS - SWALE A	C500 WATER QUALITY STRUCTURE
C105 EXISTING CONDITIONS - SPORTS FIELDS	C501 PEDESTRIAN WOOD BRIDGE
C200 GRADING AND DRAINAGE PLAN/PROFILE - POND A	C502 STORM DETAILS
C201 GRADING AND DRAINAGE PLAN/PROFILE - POND B	C503 STORM DETAILS
C202 POND B BYPASS LINE AND CUTOFF TRENCH PLAN/PROFILE	C504 STREET AND STORM DETAILS
C203 GRADING AND DRAINAGE PLAN/PROFILE - 145TH	FIG5 WETLAND MITIGATION GRADING PLAN
C204 GRADING AND DRAINAGE PLAN/PROFILE - CALLAHAN RD	FIG8 WETLAND MITIGATION PLANTING PLAN
C205 GRADING AND DRAINAGE PLAN/PROFILE - SWALE A	
C206 GRADING AND DRAINAGE PLAN STORM LINE J AND SWALE B	
C206A VERTICAL PROFILE STORM LINE J AND SWALE B	
C207 ACCESS ROAD	
C208 EROSION CONTROL DETAILS	

VERTICAL DATUM: ELEVATIONS ARE BASED ON "TBM #2" AS SHOWN ON THE SE 145TH AVE. (HALF STREET IMPROVEMENTS) CONSTRUCTION PLAN DATED JUNE, 1998 (MOST CURRENT REVISION) BY COMPASS CORPORATION FOR THE CITY OF HAPPY VALLEY. DATUM IS BASED ON NGVD 1929 PER VERTICAL CONTROL FOR THE CLACKAMAS COUNTY SERVICE DISTRICT (PRE 1997). THE ORIGINAL BENCH MARK WAS THE ONE-QUARTER CORNER OF SECTIONS 25/26 (SINCE DESTROYED) AND WAS USED FOR MT. SCOTT SEWER INTERCEPTOR PROJECT AND SUBSEQUENTLY RUN TO SAID "TBM #2" BY COMPASS CORPORATION.

WES 2114
 5415 SW Westgate Dr., Portland Oregon 972213
 503 | 419-2500
 503 | 419-2600
 PLANNERS - ENGINEERS - LANDSCAPE ARCHITECTS - SURVEYORS

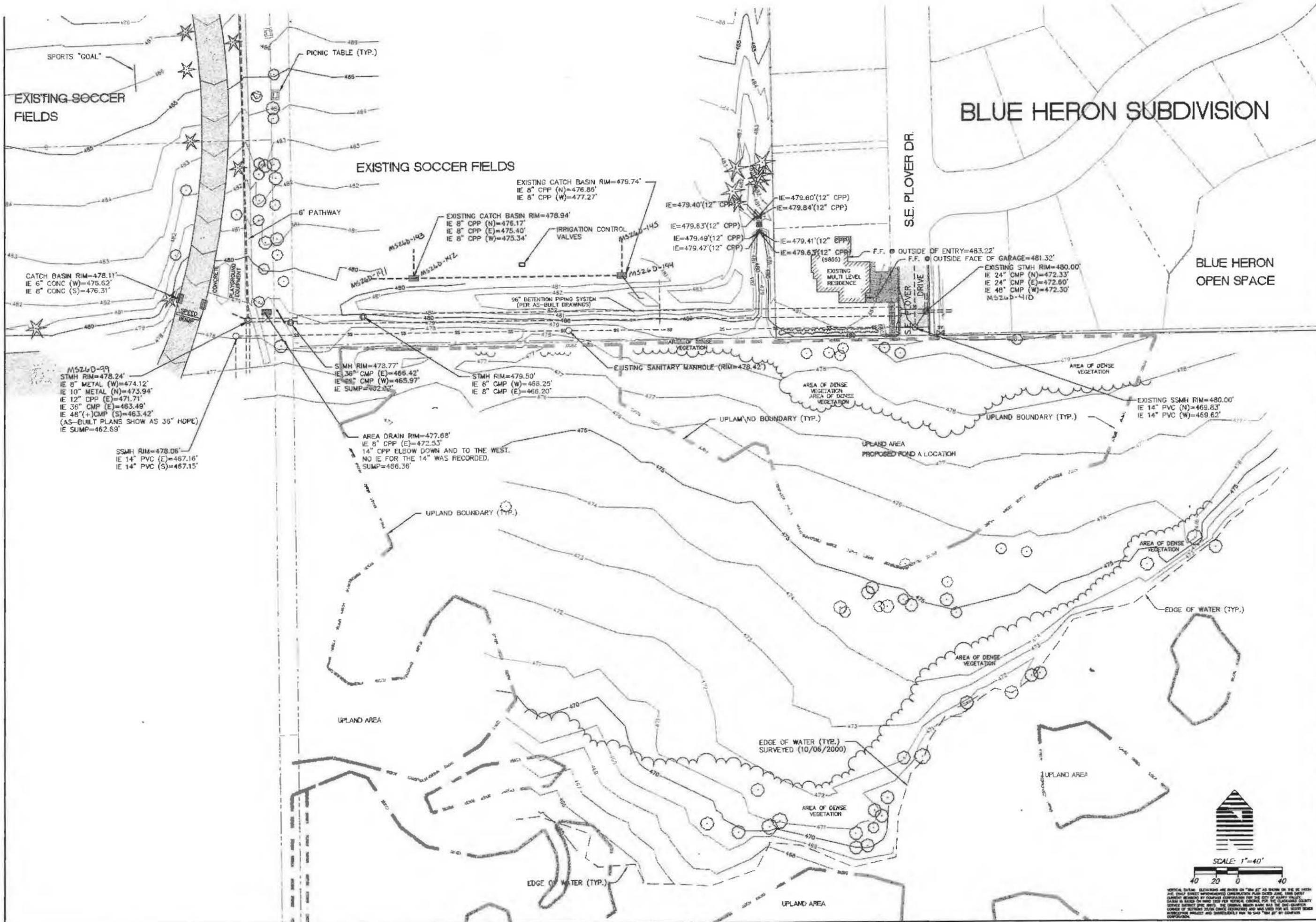


**COVER SHEET / PHASE I WETLAND MITIGATION
 PHASE I DRAWINGS**
**SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
 CLACKAMAS COUNTY - SERVICE DISTRICT #1**
 9101 SE SUNNYSIDE BLVD., CLACKAMAS, OR 97015

**AS-BUILT
 DRAWING**
 10/17/2002
 THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING SUBORDINATE STANDARDS.

PROJECT NO. **WES2114**
 DATE 04/29/2002
 DESIGNED C. JESIC
 ENGINEER J. REIMANN
 CHECKED

SHEET TITLE **COVER SHEET**
 SHEET NUMBER **C000**



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5415 SW Westgate Dr., Suite 100, Portland, OR 97221
503 419-2500 FAX: 503 419-2600



EXISTING CONDITIONS - POND A

**SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
CLACKAMAS COUNTY - SERVICE DISTRICT #1**

9101 SE SUNNYBROOK BLVD., CLACKAMAS OR 97015

**AS-BUILT
DRAWING**
10/17/2002

THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO.
WES2114

DATE 04/29/2002
DESIGNED C. JESIC
ENGINEER J. REIMANN
CHECKED

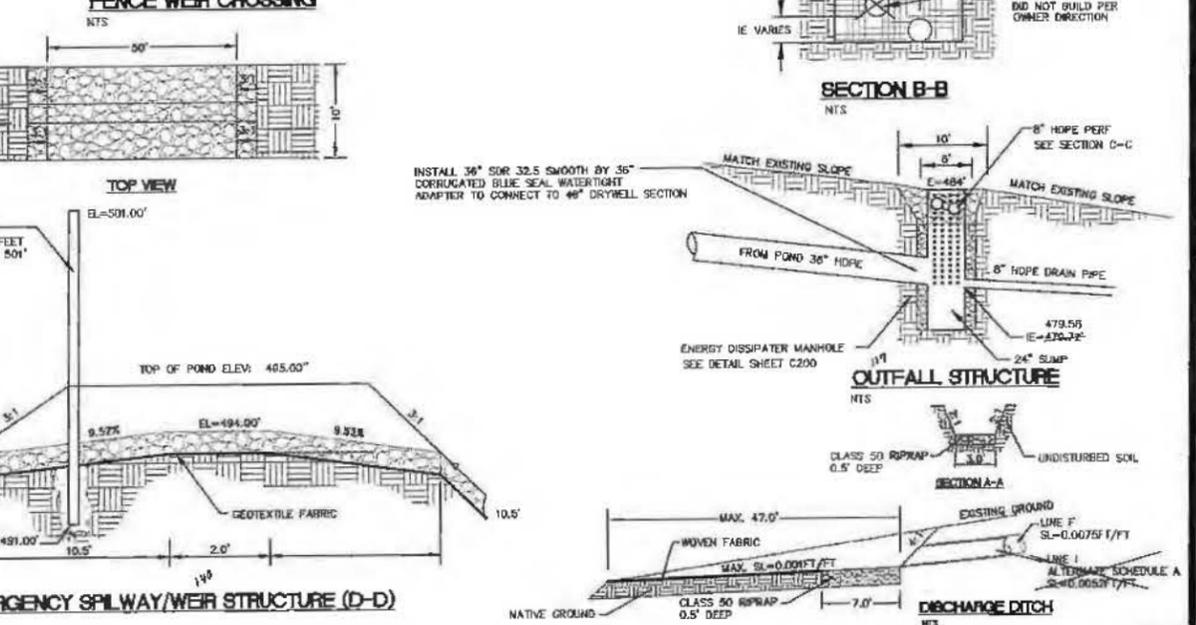
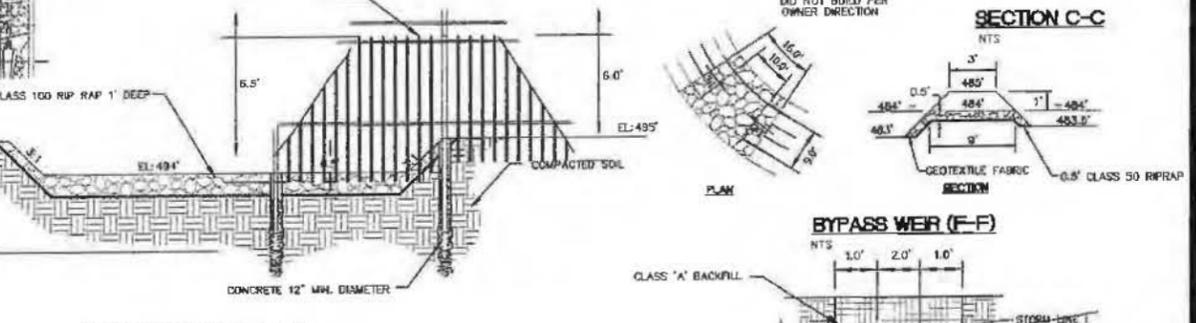
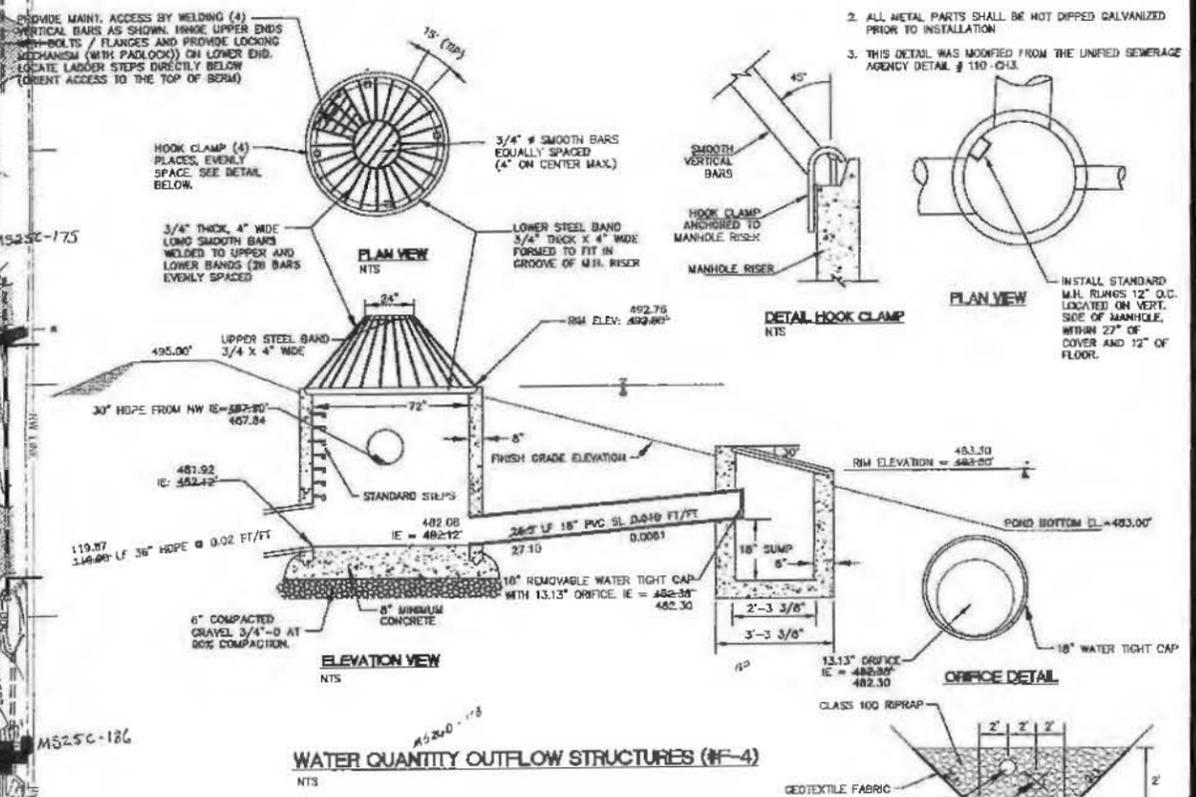
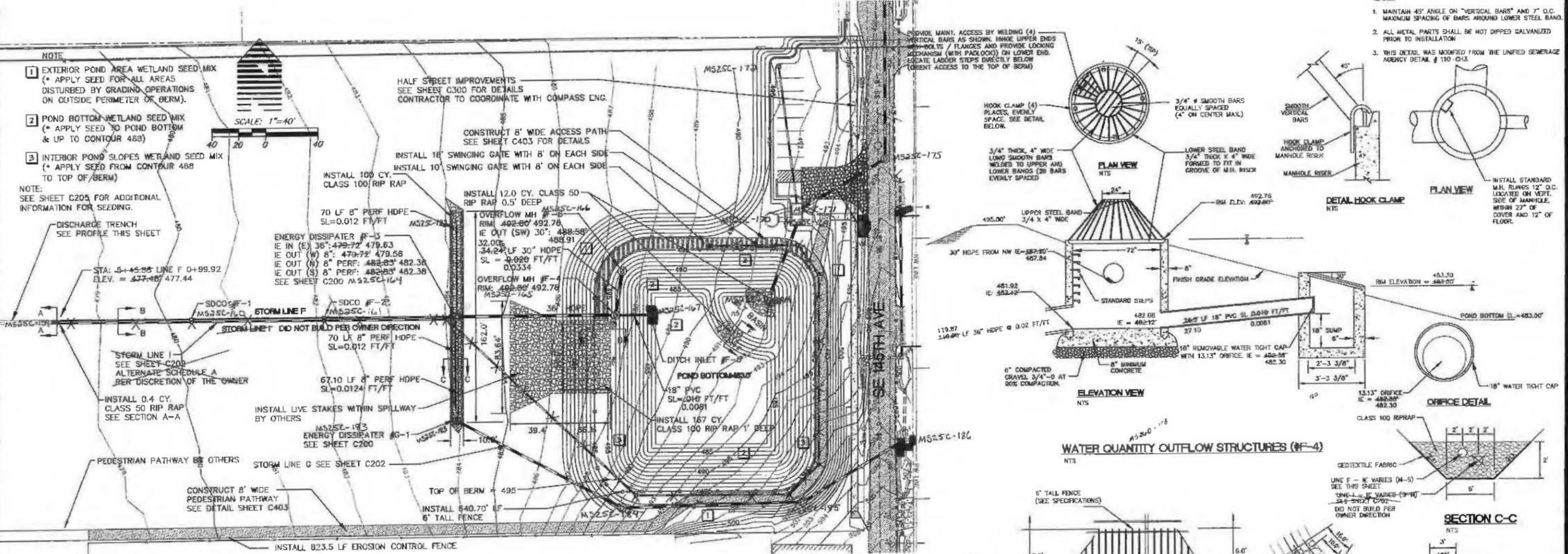
SHEET TITLE
EX. CONDITION

SHEET NUMBER

C100

VERTICAL CURVE ELEVATIONS ARE BASED ON "FIN" AT 20 FEET ON THE 10 FEET AND 20 FEET SPACING CONSTRUCTION PLAN OVER TIME. THE ONLY CHANGE SHOULD BE COMPARE CONSTRUCTION FOR THE CITY OF PORTLAND. DRAWN IN ACCORDANCE WITH THE CITY OF PORTLAND COUNTY SERVICE DISTRICT SPEC. PART 7. THE ORIGINAL DESIGN WAS THE QUARTER CORNER OF SECTION 36/4N/06E/001 AND WAS USED FOR THE 2002 RECONSTRUCTION PROJECT AND SUBSEQUENTLY FOR THE 2004 "FIN" BY COMPASS CONSTRUCTION.

- NOTE**
- EXTERIOR POND AREA WETLAND SEED MIX (* APPLY SEED FOR ALL AREAS DISTURBED BY GRADING OPERATIONS ON OUTSIDE PERIMETER OR BERM).
 - POND BOTTOM WETLAND SEED MIX (* APPLY SEED TO POND BOTTOM & UP TO CONTOUR 488)
 - INTERIOR POND SLOPES WETLAND SEED MIX (* APPLY SEED FROM CONTOUR 488 TO TOP OF BERM)
- NOTE: SEE SHEET C205 FOR ADDITIONAL INFORMATION FOR SEEDING.



STATION	LINE	TYPE	START ELEV.	END ELEV.	LENGTH	SLOPE	REMARKS
0+99.92	F	36" HDPE	477.44	479.63	36.71	0.0017	DISCHARGE DITCH SEE SECTION A-A
1+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
2+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
3+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
4+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
5+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
6+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
7+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
8+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
9+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
10+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
11+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
12+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
13+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
14+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
15+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
16+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
17+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
18+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
19+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
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21+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
22+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
23+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
24+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
25+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
26+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
27+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
28+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
29+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
30+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
31+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
32+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
33+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
34+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
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37+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
38+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
39+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
40+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
41+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
42+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
43+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
44+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
45+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
46+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
47+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
48+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
49+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP
50+98.01	F	8" HDPE	480.35	479.07	128.34	0.0075	CLASS 50 RIP RAP 0.5' DEEP

W R G
DESIGN INC.

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503 | 416-2500
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GRADING AND DRAINAGE PLAN/PROFILE POND B

SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
CLACKAMAS COUNTY - SERVICE DISTRICT #1

9101 SE SUNNYBROOK BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
10/17/2002

THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED BY THE CONTRACTOR ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO. **WES2114**

DATE | 04/29/2002

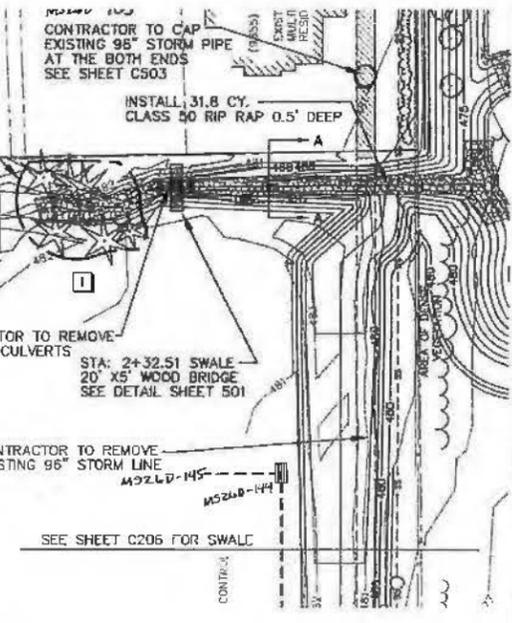
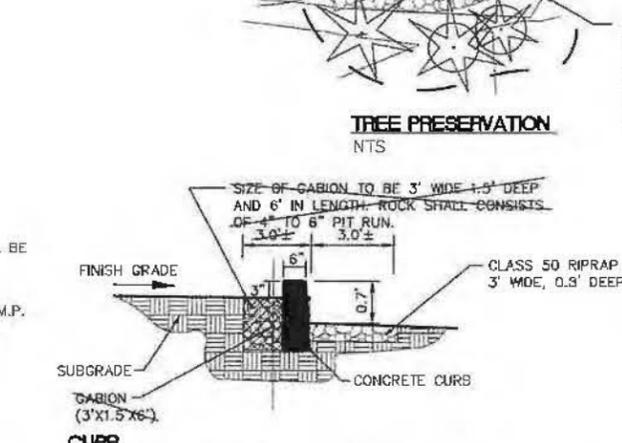
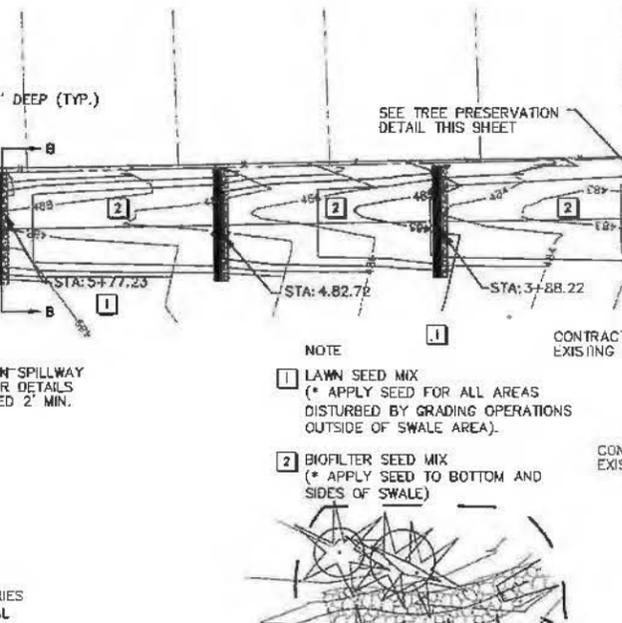
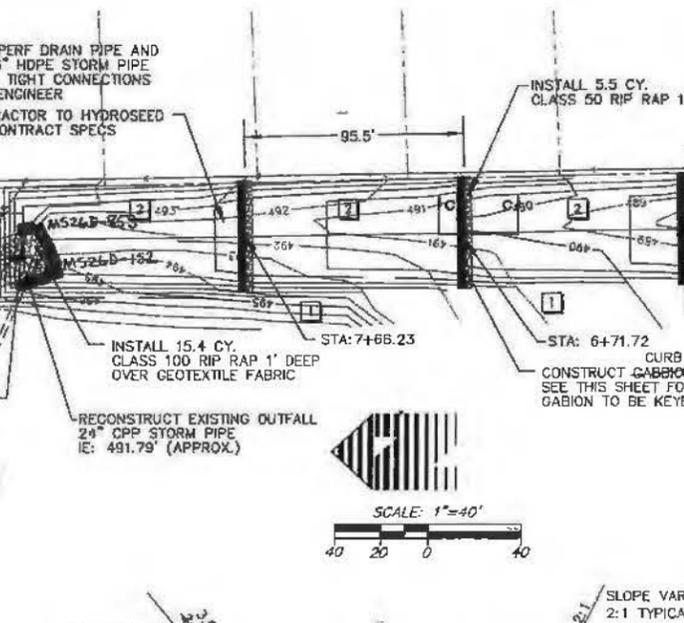
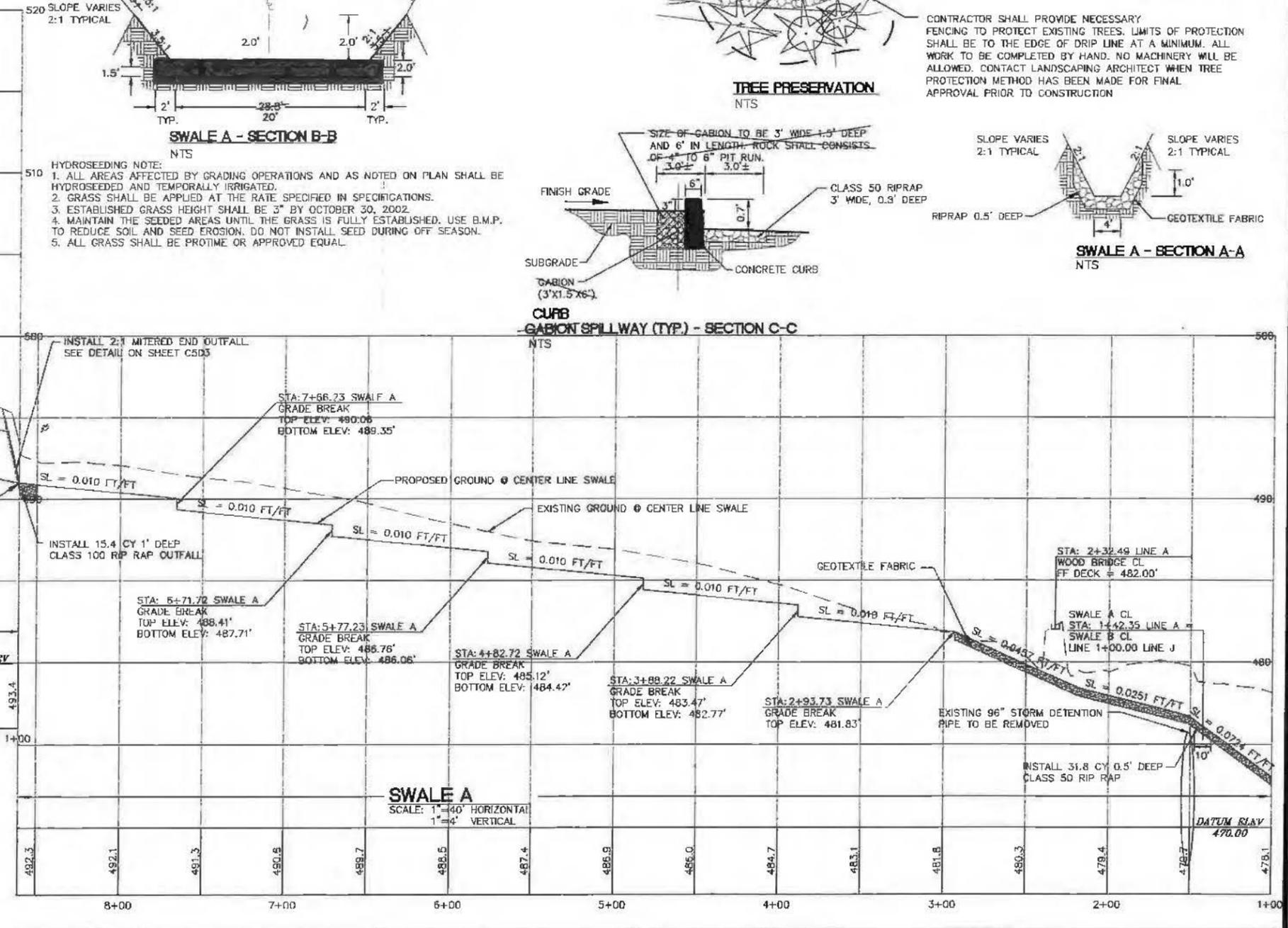
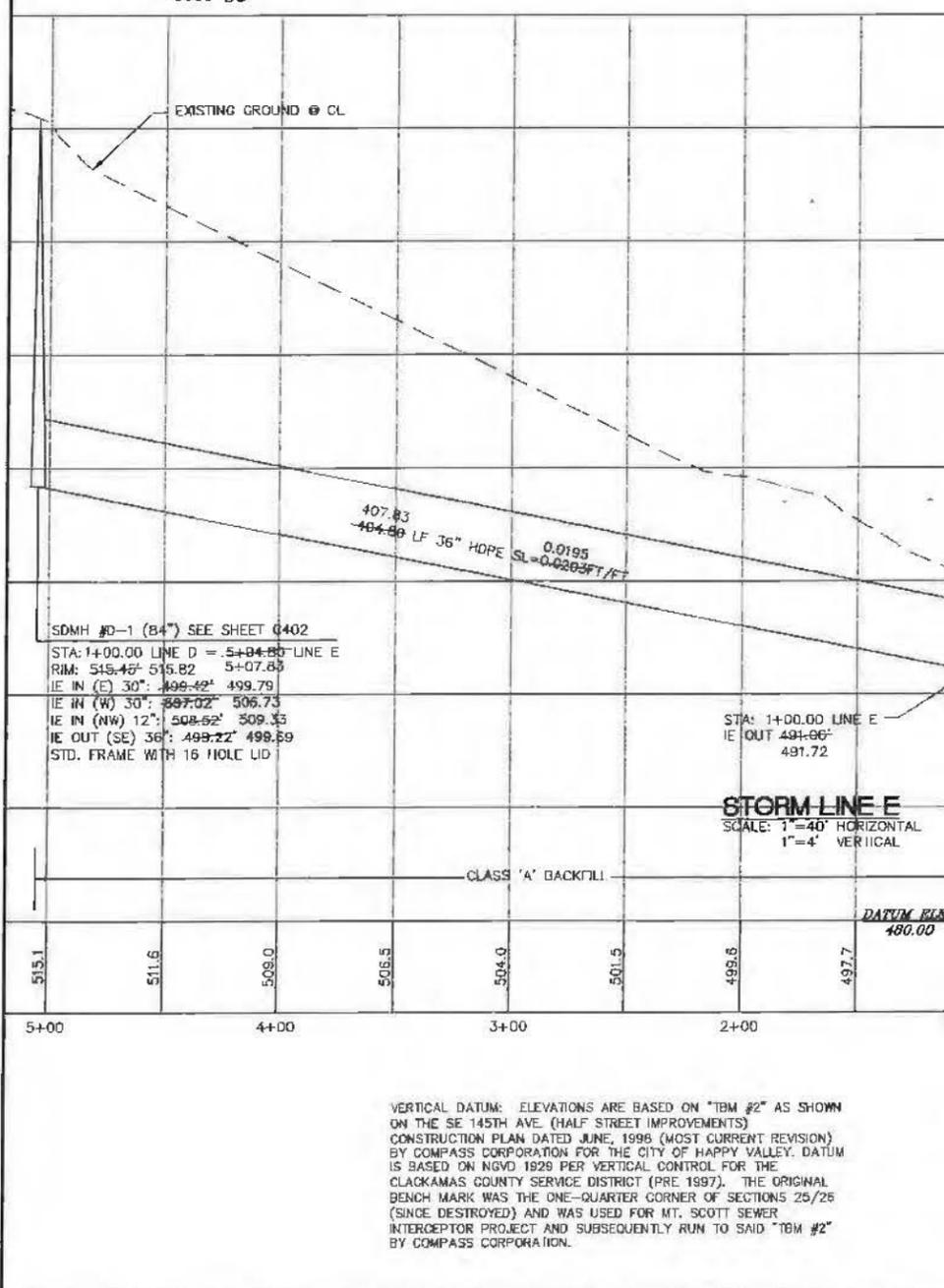
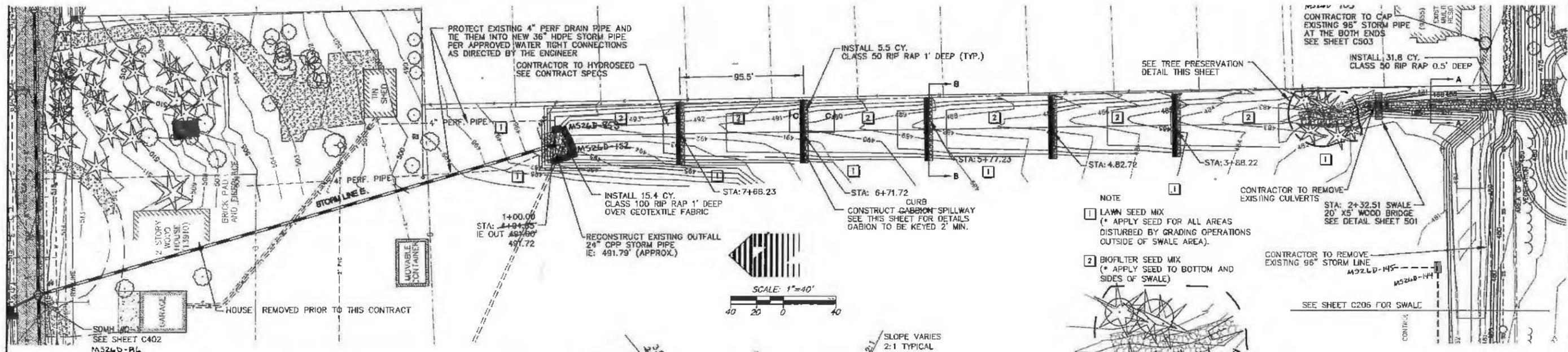
DESIGNED | C. JESIC

ENGINEER | J. REIMANN

CHECKED |

SHEET TITLE | **GRADING/DRAIN.**

SHEET NUMBER | **C201**



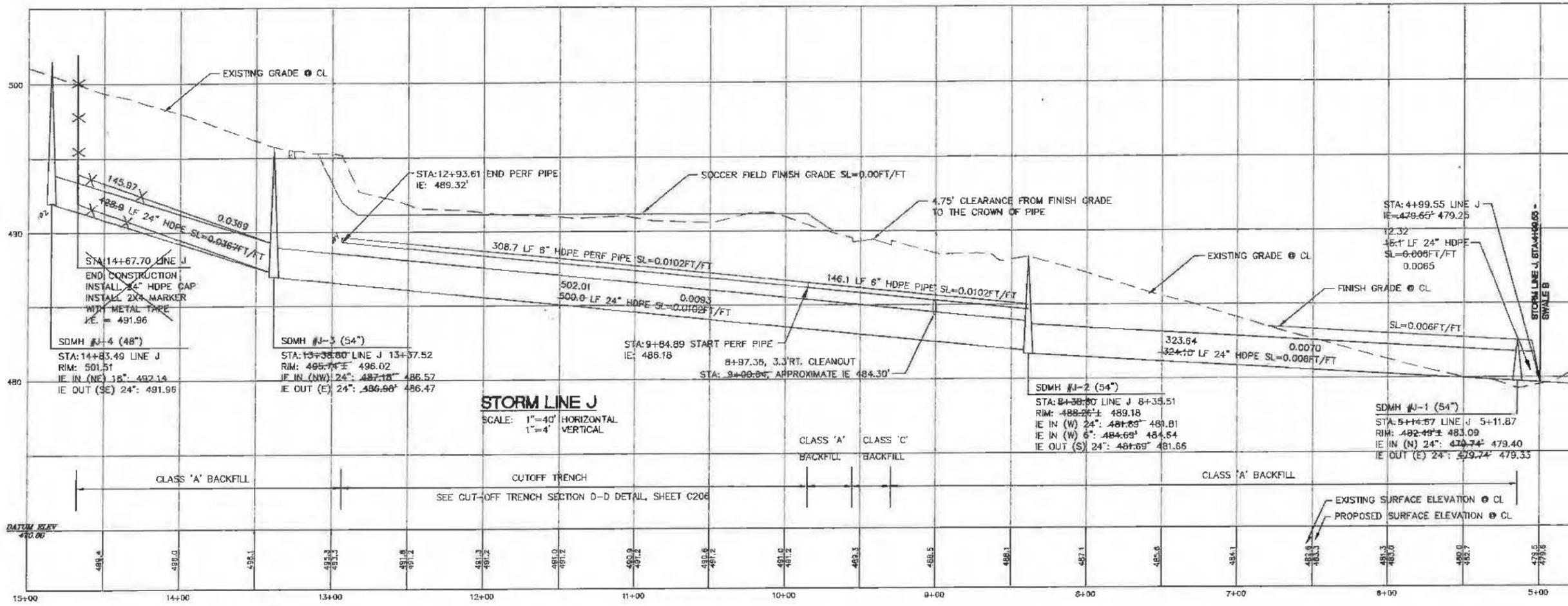
HYDROSEEDING NOTE:
 1. ALL AREAS AFFECTED BY GRADING OPERATIONS AND AS NOTED ON PLAN SHALL BE HYDROSEEDED AND TEMPORALLY IRRIGATED.
 2. GRASS SHALL BE APPLIED AT THE RATE SPECIFIED IN SPECIFICATIONS.
 3. ESTABLISHED GRASS HEIGHT SHALL BE 3" BY OCTOBER 30, 2002.
 4. MAINTAIN THE SEEDING AREAS UNTIL THE GRASS IS FULLY ESTABLISHED. USE B.M.P. TO REDUCE SOIL AND SEED EROSION. DO NOT INSTALL SEED DURING OFF SEASON.
 5. ALL GRASS SHALL BE PROTIME OR APPROVED EQUAL.

VERTICAL DATUM: ELEVATIONS ARE BASED ON "TBM #2" AS SHOWN ON THE SE 145TH AVE. (HALF STREET IMPROVEMENTS) CONSTRUCTION PLAN DATED JUNE, 1996 (MOST CURRENT REVISION) BY COMPASS CORPORATION FOR THE CITY OF HAPPY VALLEY. DATUM IS BASED ON NGVD 1929 PER VERTICAL CONTROL FOR THE CLACKAMAS COUNTY SERVICE DISTRICT (PRE 1997). THE ORIGINAL BENCH MARK WAS THE ONE-QUARTER CORNER OF SECTIONS 25/26 (SINCE DESTROYED) AND WAS USED FOR MT. SCOTT SEWER INTERCEPTOR PROJECT AND SUBSEQUENTLY RUN TO SAID "TBM #2" BY COMPASS CORPORATION.

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 E S I O N
 D
 5415 SW Westgate Dr., Suite 100, Portland, OR 97221
 503 419-2500 FAX: 503 419-2600
 PLANNERS ENGINEERS & LANDSCAPE ARCHITECTS SURVEYORS
 REGISTERED PROFESSIONAL ENGINEER
 NATHAN P. REIMANN
 EXPIRES 12/31/04

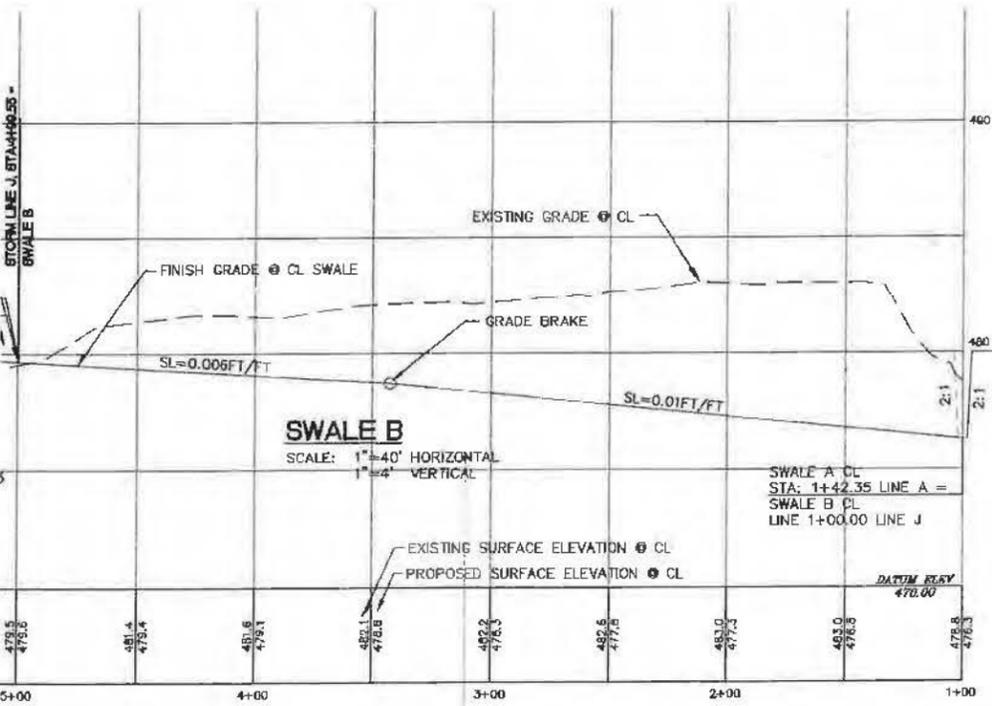
GRADING AND DRAINAGE PLAN/PROFILE SWALE A
 SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
 CLACKAMAS COUNTY - SERVICE DISTRICT #1
 9107 SE SUNNYSIDE BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
 10/17/2002
 THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS MEET ALL REQUIREMENTS WITH GOVERNING JURISDICTIONAL STANDARDS.
 PROJECT NO. **WES2114**
 DATE 04/29/2002
 DESIGNED BY C. JESIC
 ENGINEER J. REIMANN
 CHECKED
 SHEET TITLE **GRADING/DRAIN.**
 SHEET NUMBER **C205**
MS187B



STORM LINE J
 SCALE: 1"=40' HORIZONTAL
 1"=4' VERTICAL

CLASS 'A' BACKFILL
 CUTOFF TRENCH
 SEE CUT-OFF TRENCH SECTION D-D DETAIL, SHEET C206



SWALE B
 SCALE: 1"=40' HORIZONTAL
 1"=4' VERTICAL

SWALE A CL
 STA: 1+42.35 LINE A =
 SWALE B CL
 LINE 1+00.00 LINE J



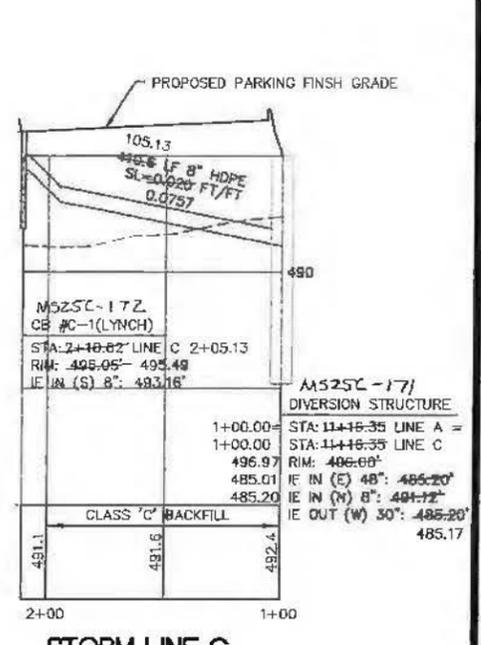
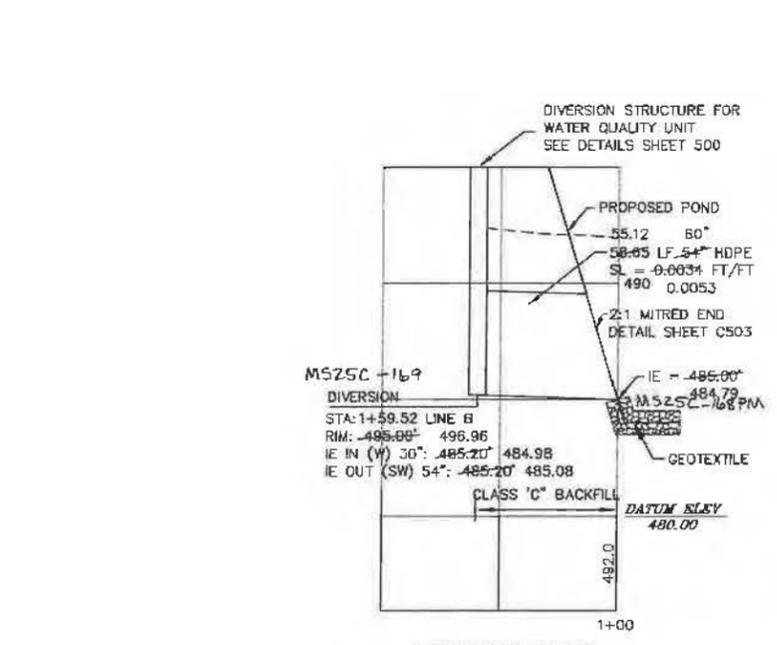
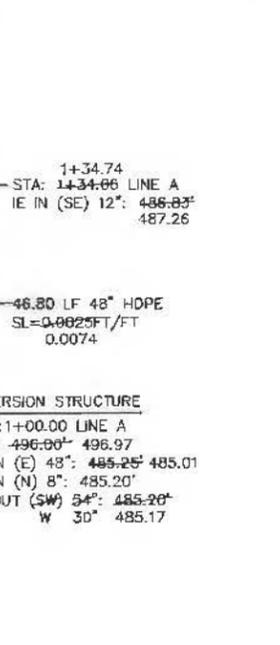
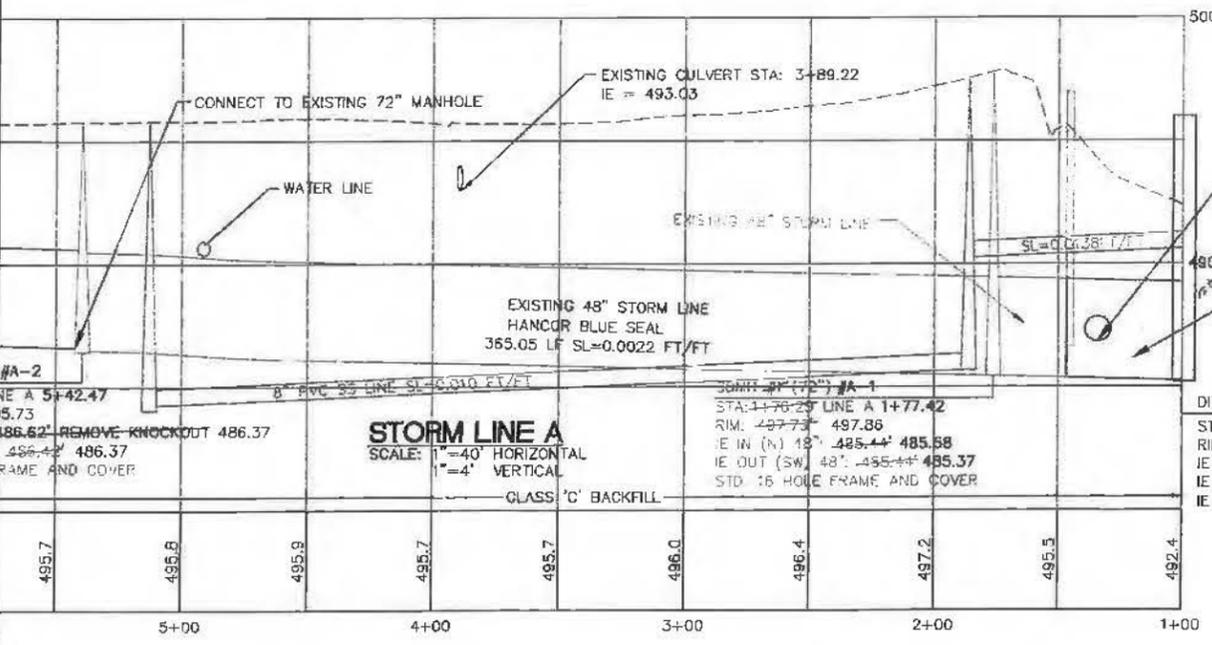
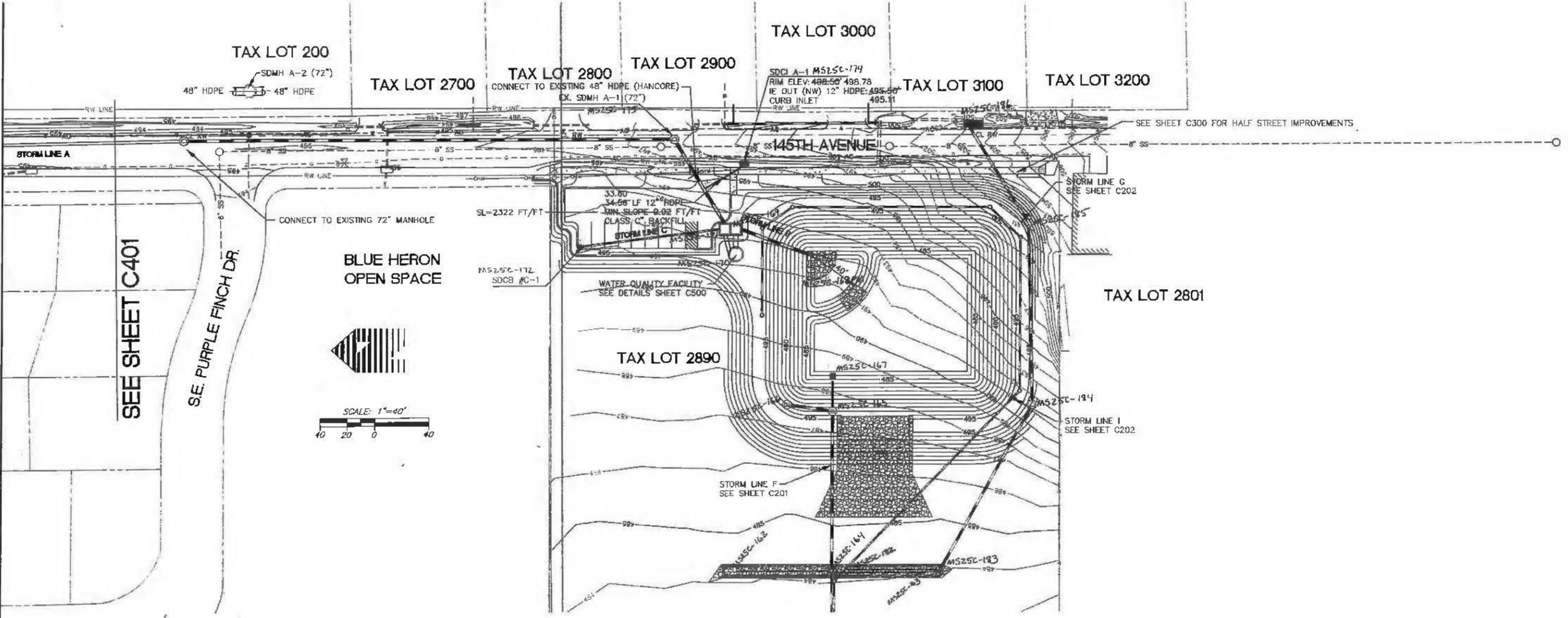
VERTICAL PROFILE STORM LINE J AND SWALE B
 SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
 CLACKAMAS COUNTY - SERVICE DISTRICT #1
 9101 SE SUNNYBROOK BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
 10/17/2002
 THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION OBTAINED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO. **WES2114**
 DATE 04/29/2002
 DESIGNED BY C. JESIC
 ENGINEER J. REIMANN
 CHECKED

SHEET TITLE **GRADING/DRAIN.**
 SHEET NUMBER **C206A**

VERTICAL DATUM: ELEVATIONS ARE BASED ON "BM #2" AS SHOWN ON THE SE 145TH AVE. (HALF STREET IMPROVEMENTS) CONSTRUCTION PLAN DATED JUNE, 1998 (MOST CURRENT REVISION) BY COMPASS CORPORATION FOR THE CITY OF HAPPY VALLEY. DATUM IS BASED ON NGVD 1929 PER VERTICAL CONTROL FOR THE CLACKAMAS COUNTY SERVICE DISTRICT (PRE 1997). THE ORIGINAL BENCH MARK WAS THE ONE-QUARTER CORNER OF SECTIONS 25/20 (SINCE DESTROYED) AND WAS USED FOR MT. SCOTT SEWER INTERCEPTOR PROJECT AND SUBSEQUENTLY RUN TO SAID "BM #2" BY COMPASS CORPORATION.



VERTICAL DATUM: ELEVATIONS ARE BASED ON "TBM #2" AS SHOWN ON THE SE 145TH AVE (HALF STREET IMPROVEMENTS) CONSTRUCTION PLAN DATED JUNE, 1998 (MOST CURRENT REVISION) BY COMPASS CORPORATION FOR THE CITY OF HAPPY VALLEY. DATUM IS BASED ON NVD 1929 PER VERTICAL CONTROL FOR THE CLACKAMAS COUNTY SERVICE DISTRICT (PRE 1997). THE ORIGINAL BENCH MARK WAS THE ONE-QUARTER CORNER OF SECTIONS 25/26 (SINCE DESTROYED) AND WAS USED FOR MT. SCOTT SEWER INTERCEPTOR PROJECT AND SUBSEQUENTLY RUN TO SAID "TBM #2" BY COMPASS CORPORATION.

W R G
ENGINEERS
5415 SW Westgate Dr., Suite 100, Portland, OR 97221
503 | 419-2500 FAX: 503 | 419-2800
PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS

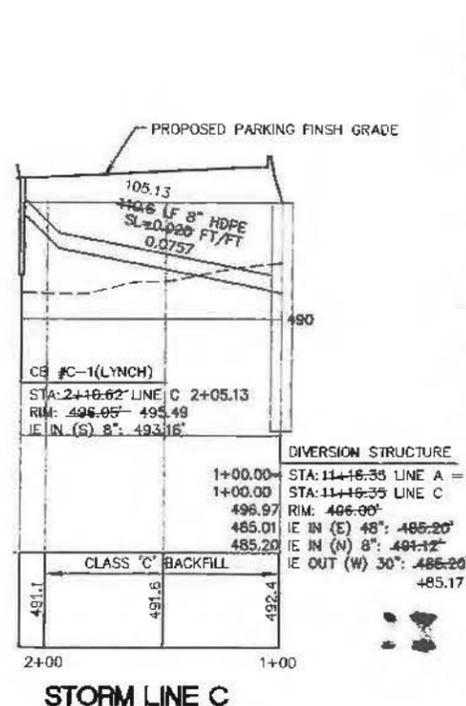
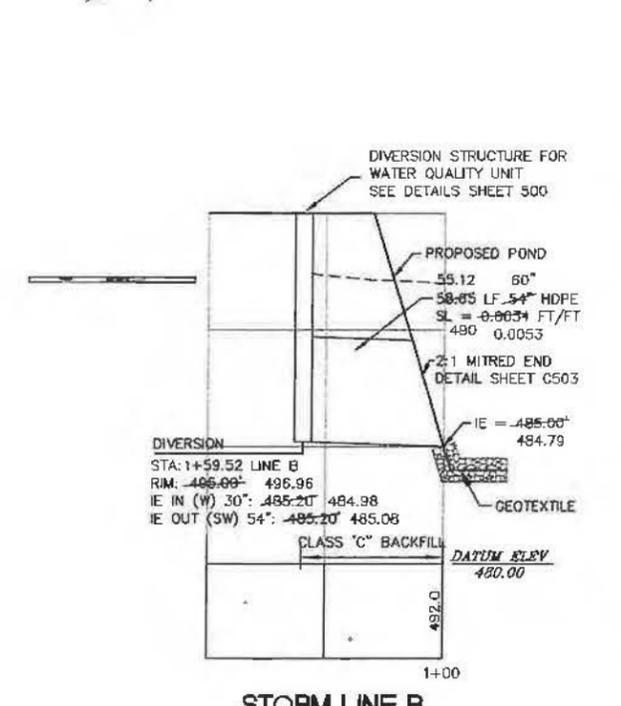
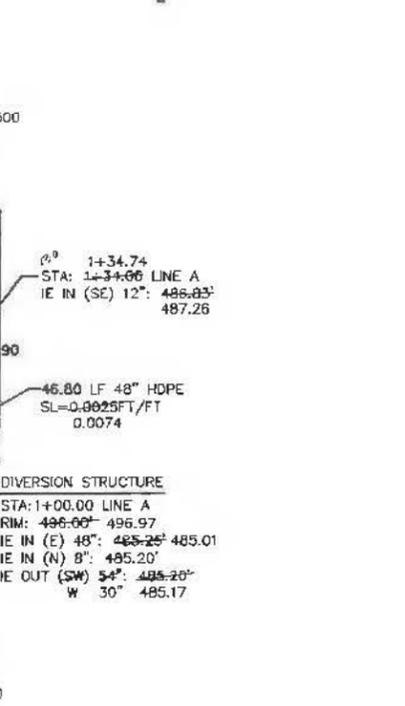
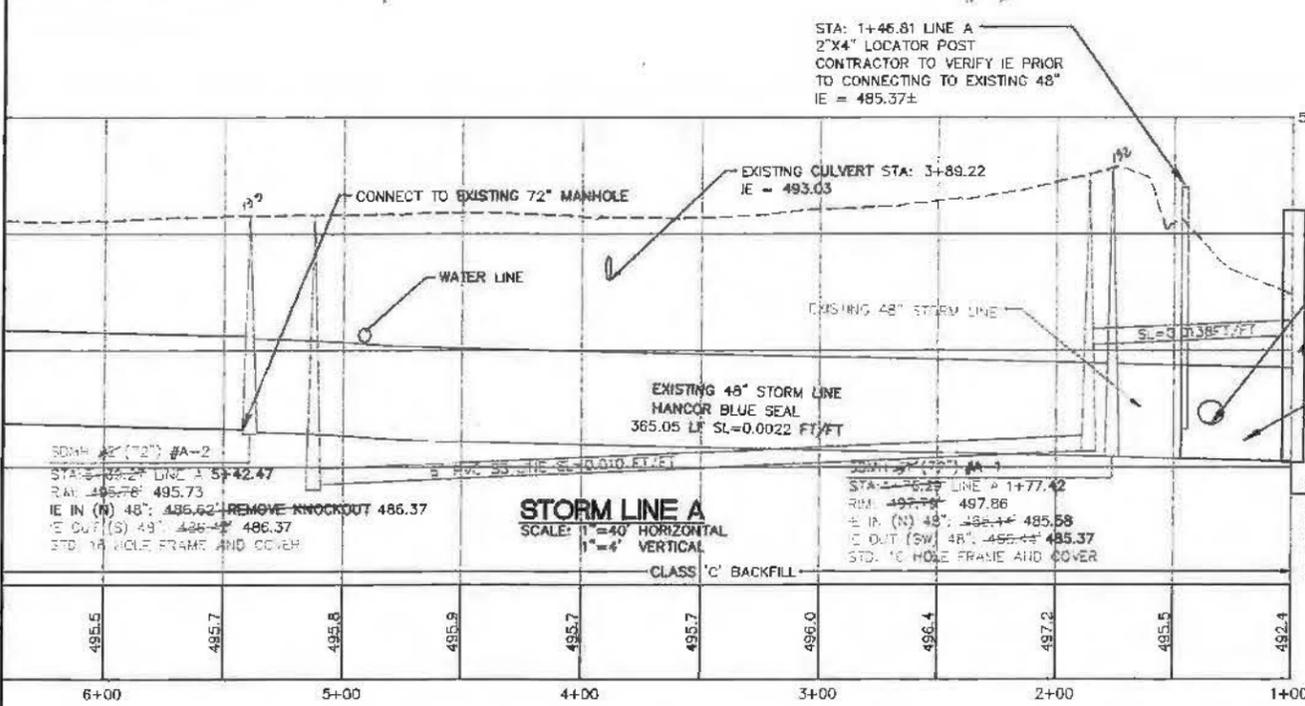
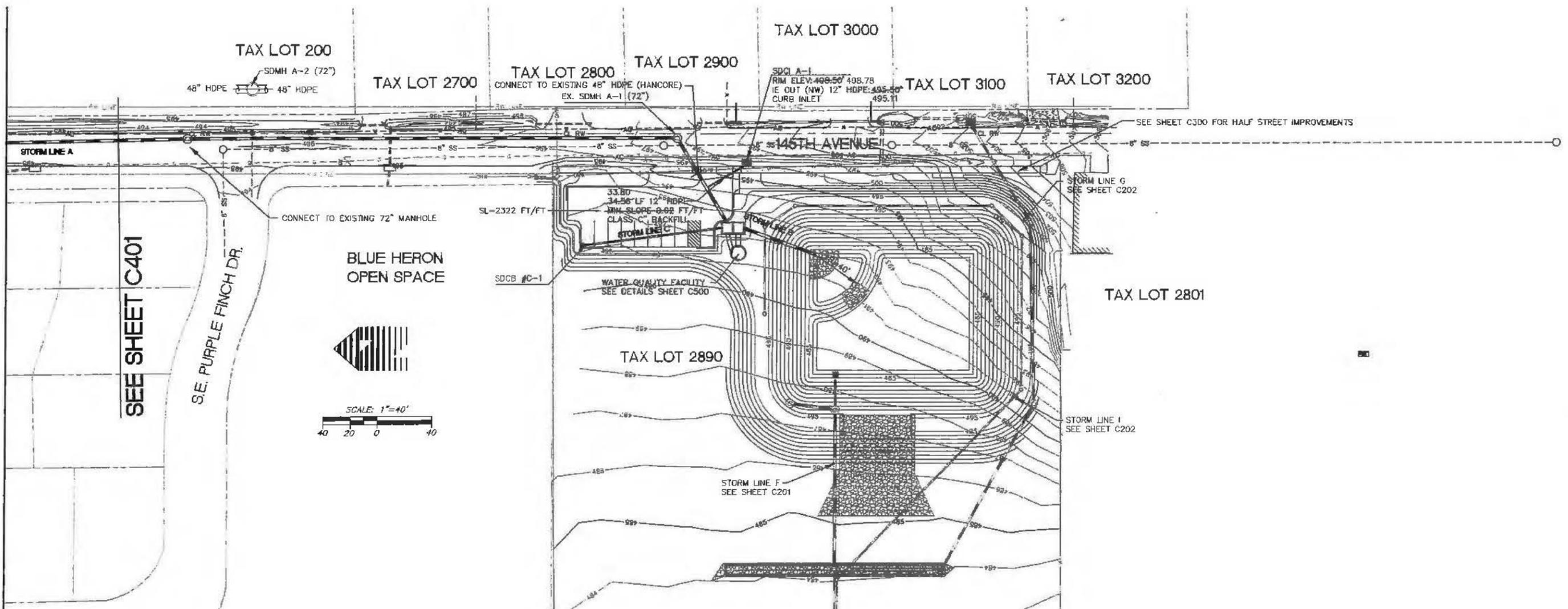


STORM PLAN AND PROFILE - 145TH
SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
CLACKAMAS COUNTY - SERVICE DISTRICT #1
9101 SE SUNNIBROOK BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
10/17/2002
THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED IN PART, ON THE BASIS OF INFORMATION SUPPLIED AND FORWARDED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO. **WES2114**
DATE 04/29/2002
DESIGNED BY C. JESIC
ENGINEER J. REIMANN
CHECKED

SHEET TITLE **STORM**
SHEET NUMBER **C400**



STORM LINE A
SCALE: 1"=40' HORIZONTAL
1"=4' VERTICAL

STORM LINE B
SCALE: 1"=40' HORIZONTAL
1"=4' VERTICAL

STORM LINE C
SCALE: 1"=40' HORIZONTAL
1"=4' VERTICAL

AS-BUILT DRAWING
10/17/2002

PROJECT NO. **WES214**

DATE 04/29/2002
DESIGNED | C. JESIC
ENGINEER | J. REIMANN
CHECKED |

SHEET TITLE **STORM**

SHEET NUMBER **C400**

WES214

W R G
DESIGN INC.

5415 SW Westgate Dr., Suite 100, Portland, OR 97222
TEL: 503 419-2500 FAX: 503 419-2500
PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS



STORM PLAN AND PROFILE - 145TH

SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
CLACKAMAS COUNTY - SERVICE DISTRICT #1

9101 SE SUNNIBROOK BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
10/17/2002

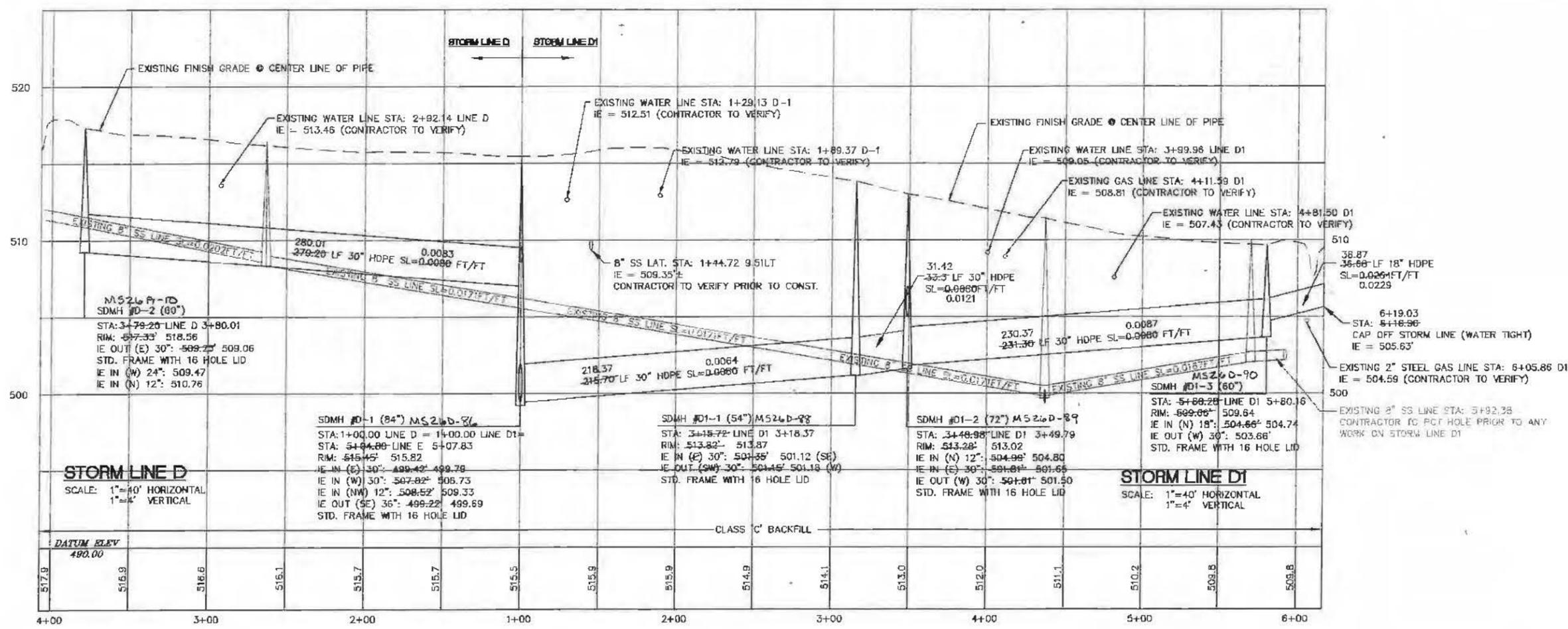
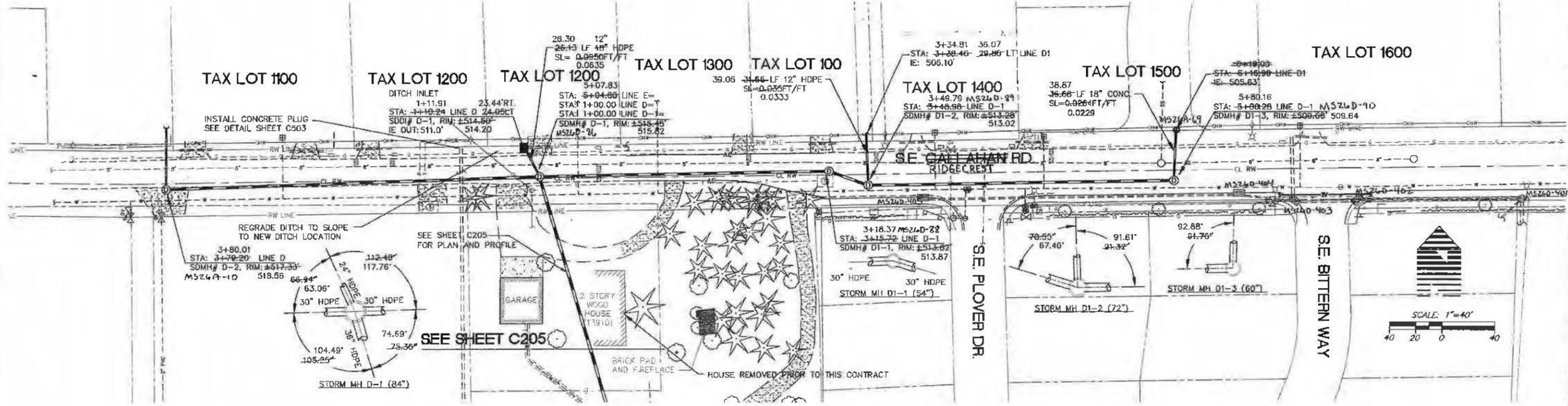
THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO. **WES214**

DATE 04/29/2002
DESIGNED | C. JESIC
ENGINEER | J. REIMANN
CHECKED |

SHEET TITLE **STORM**

SHEET NUMBER **C400**



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 ENGINEERS
 5415 SW Westgate Dr., Suite 100, Portland, OR 97221
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 PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS



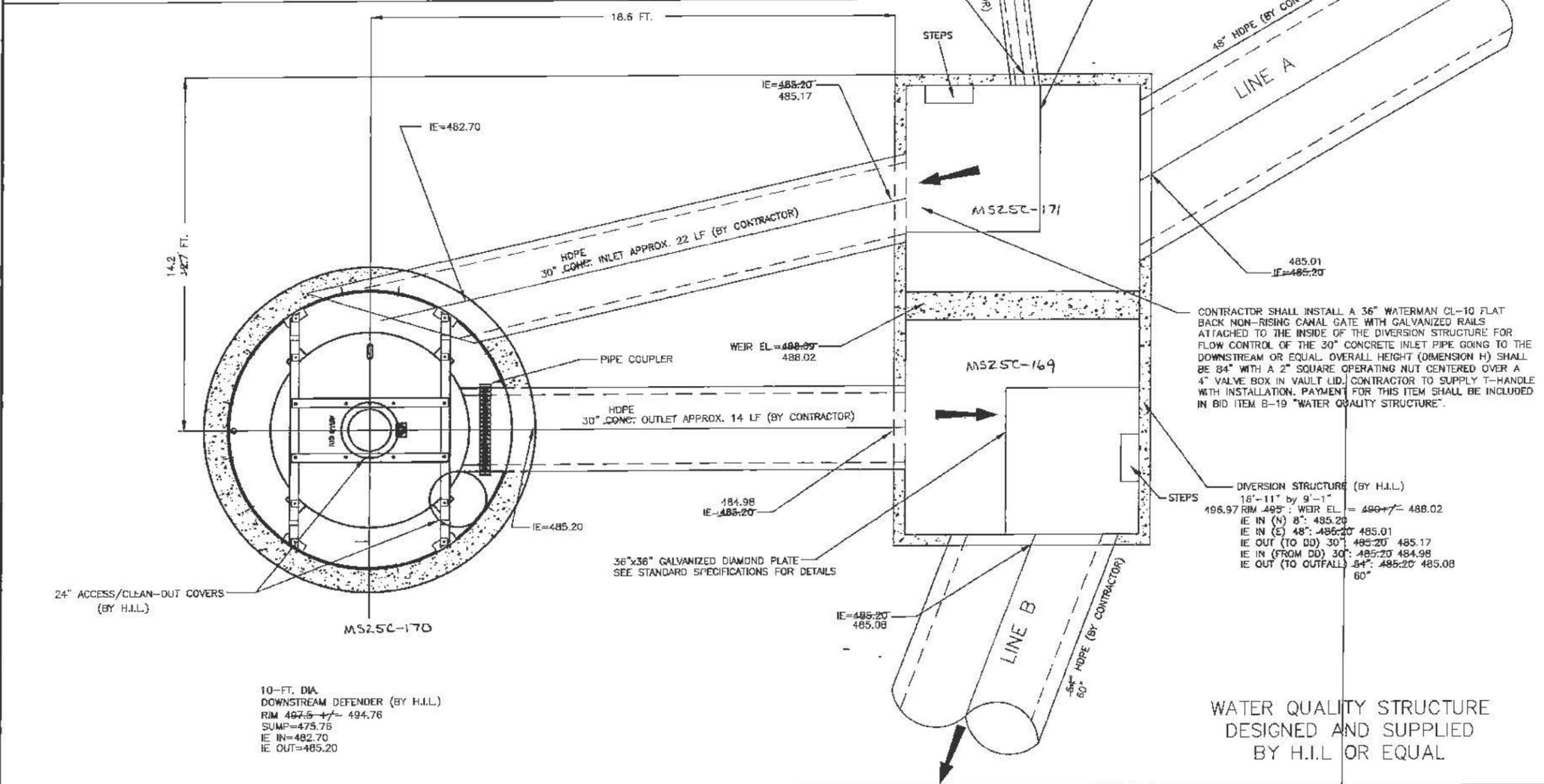
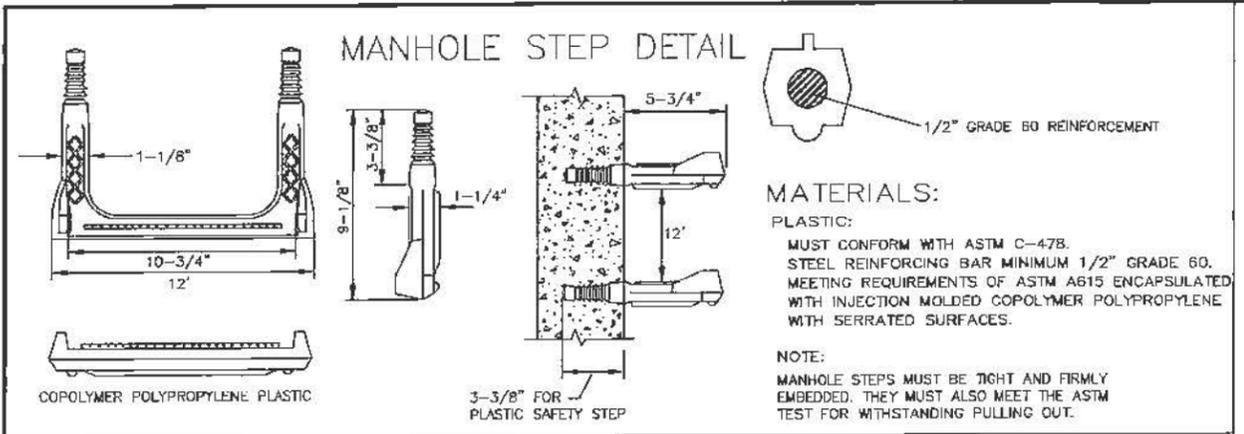
STORM PLAN AND PROFILE - CALLAHAN
 SUBREGIONAL DETENTION FACILITIES/WETLAND MITIGATION
 CLACKAMAS COUNTY - SERVICE DISTRICT #1
 9101 SE SUNNYBROOK BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
 10/17/2002
 THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT AN ACCURATE REPRESENTATION OF THE CONSTRUCTION AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO. **WES2114**
 DATE 04/29/2002
 DESIGNED C. JESIC
 ENGINEER J. REIMANN
 CHECKED

SHEET TITLE **STORM**
 SHEET NUMBER **C402**
MS187C

VERTICAL DATUM: ELEVATIONS ARE BASED ON "TBM #2" AS SHOWN ON THE SE 145TH AVE. (HALF STREET IMPROVEMENTS) CONSTRUCTION PLAN DATED JUNE, 1998 (MOST CURRENT REVISION) BY COMPASS CORPORATION FOR THE CITY OF HAPPY VALLEY. DATUM IS BASED ON NGVD 1929 PER VERTICAL CONTROL FOR THE CLACKAMAS COUNTY SERVICE DISTRICT (PRE 1997). THE ORIGINAL BENCH MARK WAS THE ONE-QUARTER CORNER OF SECTIONS 25/28 (SINCE DESTROYED) AND WAS USED FOR MT. SCOTT SEWER INTERCEPTOR PROJECT AND SUBSEQUENTLY RUN TO SAID "TBM #2" BY COMPASS CORPORATION.



- Notes**
- THIS DRAWING IS A LEDGER SIZE ORIGINAL.
 - DIMENSIONS ARE GENERAL AND INTENDED FOR GUIDANCE ONLY.
 - THE ORIENTATION OF INLET PIPE AND OVERFLOW PIPE CAN BE ADJUSTED TO SITE REQUIREMENTS. SEE SITE PLAN FOR ORIENTATION OF INLET AND OVERFLOW PIPES.
 - INLET PIPE MUST BE TANGENT TO CONCRETE MANHOLE.
 - OVERFLOW PIPE STUB O.D. MATCHES ADS.
 - MASONRY FIXING BOLTS TO BE SUPPLIED BY CONCRETE SUPPLIER.

A	MPW	7/22/99	FIRST ISSUE
Rev	By	Date	Description
		4/25/01	NTS
Date		Scale	
Drawn by		Checked Eng.	
Checked Prod.		Approved by	

Title
 10 FT. DIA.
 DOWNSTREAM DEFENDER™
 HAPPY VALLEY
 CLACKAMAS COUNTY, OR

PLAN VIEW

H.I.L.
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 INC.

H.I.L. TECHNOLOGY INC.
 94 Hutchins Drive
 Portland, Maine 04102
 TEL - (207) 756-6200
 FAX - (207) 756-6212
 E-mail: HILTECH@HIL-TECH.COM

CAD Ref:	10qa1a
Wipe No.	2000-332
Drawing No.	10CA1
Rev.	A

W R N G
 DESIGN
 5415 SW Westgate Dr., Suite 100, Portland, OR 9722
 503 | 419-2500 FAX: 503 | 419-2600
 PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS



WATER QUALITY STRUCTURE
REGIONAL DETENTION FACILITIES
 SUB REGIONAL DETENTION FACILITIES/WETLAND MITIGATION
 CLACKAMAS COUNTY - SERVICE DISTRICT #1
 9101 SE SUNNYBROOK BLVD., CLACKAMAS OR 97015

AS-BUILT DRAWING
 10/17/2002
 THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN CONFORMANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

PROJECT NO.
WES2114
 DATE: 04/29/2002
 DESIGNED: C. JESIC
 ENGINEER: J. REIMANN
 CHECKED:

SHEET TITLE
DETAILS
 SHEET NUMBER

C500

MS187.J

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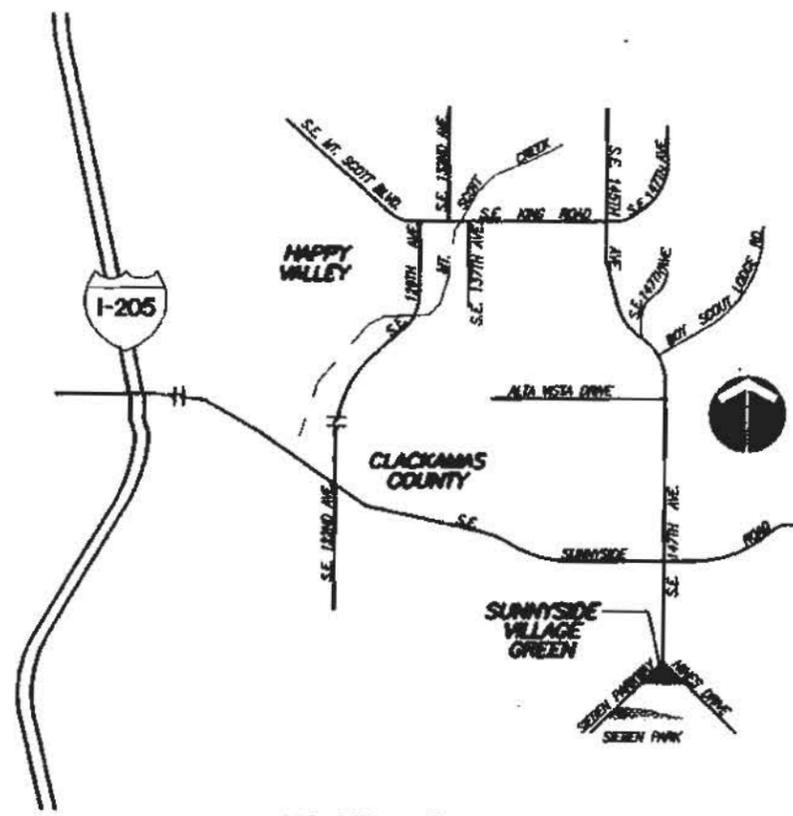
WATER QUALITY STRUCTURE
 DESIGNED AND SUPPLIED
 BY H.I.L OR EQUAL

224-272
 Lincoln 1
 Drawn
 C2964.07
 DN223.34
 SLC-OR-04
 L2964.30

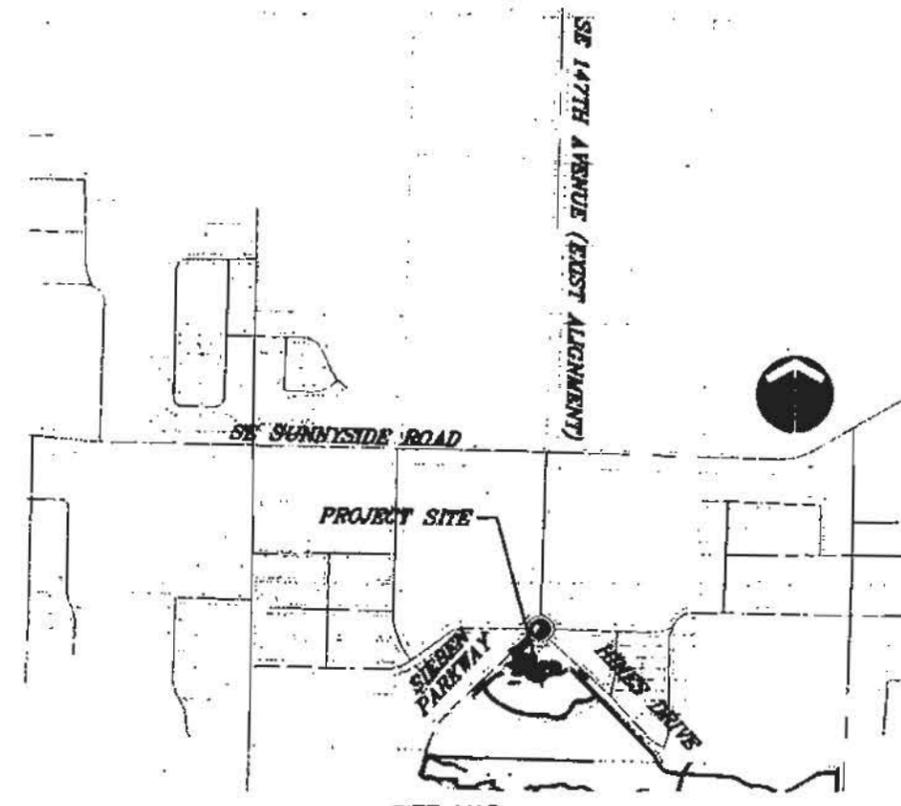
SUNNYSIDE VILLAGE GREEN CLACKAMAS COUNTY SERVICE DISTRICT NO.1 WATER ENVIRONMENT SERVICES CLACKAMAS COUNTY, OREGON

LEGEND

EXISTING	PROPOSED
	TRAFFIC
	POWER
	TELEPHONE
	WATER
	SANITARY SEWER
	GAS
	STREET CENTERLINE
	LOT LINE
	CURB LINE
	STORM SEWER PIPE
	MANHOLE
	FIRE HYDRANT
	UTILITY POLE
	CATCH BASIN/INLET
	SIDEWALK & CURB RAMP
	RIP RAP BASIN
	SILT FENCE
	FENCE
	SAWCUT LINE
	INLET PROTECTION
	DITCH PROTECTION
	NEW SIDEWALK
	SIDEWALK TO BE REMOVED & REPLACED
	PERVIOUS PORTLAND CEMENT CONCRETE SIDEWALK
	CLEANOUT
	IRRIGATION SLEEVE



VICINITY MAP
 N.T.S.



SITE MAP
 N.T.S.

GENERAL NOTES

- UNLESS OTHERWISE MODIFIED BY THESE PLANS, ALL CONSTRUCTION AND ALL MATERIALS, INSTALLATION, TESTS AND INSPECTIONS TO BE MADE IN STRICT ACCORDANCE WITH CLACKAMAS COUNTY SERVICE DISTRICT NO. 1 STANDARDS AND SPECIFICATIONS.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED TO THE BEST AVAILABLE INFORMATION. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY BY POT-HOLING THE EXISTING UTILITIES. WHEN ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND RELOCATE ANY IN CONFLICT WITH THE PROPOSED CONSTRUCTION PRIOR TO CONSTRUCTION. ANY CHANGES IN PUBLIC FACILITIES MUST BE REVIEWED AND APPROVED BY CLACKAMAS COUNTY SERVICE DISTRICT NO. 1.
- AGENCY INSPECTORS SHALL BE NOTIFIED 48 HOURS PRIOR TO CONTRACTOR INITIATING ANY WORK. 48 HOURS NOTICE IS REQUIRED PRIOR TO INSPECTING REQUESTS.
- ALL EARTHWORK SHALL BE DONE IN ACCORDANCE TO THE GEOTECHNICAL INVESTIGATION, GEOTECHNICAL ENGINEERING DESIGN STUDY - PROPOSED SUNNYSIDE VILLAGE GREEN PARK, CLACKAMAS COUNTY, OREGON BY Halcrow Inc. DATED JULY 17, 2002.
- ALL DISTURBED AREAS NOT LANDSCAPED ARE TO BE SEED TO PREVENT EROSION.
- IN CASE OF A DISCREPANCY BETWEEN THE DRAWINGS AND THE FIGURES WRITTEN THEREON, THE FIGURES SHALL BE DEEMED TO GOVERN.
- THE OWNER SHALL PROVIDE ONE SET OF CONSTRUCTION STAKES FOR THE CONTRACTOR'S USE AS SPECIFIED IN THE CONTRACT DOCUMENTS AND SPECIFICATION. THE CONTRACTOR SHALL DESIGNATE A REPRESENTATIVE OR REPRESENTATIVES WHO ARE AUTHORIZED TO REQUEST STAKES. ONLY REQUESTS FROM THE AUTHORIZED REPRESENTATIVE(S) WILL BE HONORED. STAKING REQUESTS SHALL BE MADE THROUGH DAVE LIDEN AT OTAK (503) 880-2401. ALL REQUESTS FOR EXTRA STAKES OR RE-STAKING SHALL BE MADE THROUGH THE CONTRACTOR'S AUTHORIZED REPRESENTATIVE(S) AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO MAINTAIN ACCESS TO ALL AFFECTED PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL REPLACE ALL EXISTING IMPROVEMENTS WHICH ARE AFFECTED BY THE CONSTRUCTION TO AS GOOD OR BETTER THAN ORIGINAL CONDITION. THE ORIGINAL CONDITION WILL BE VERIFIED BY COMPARING THE REPLACEMENT CONDITION WITH A VIDEO TAPE OF THE CONSTRUCTION AREA TAKEN PRIOR TO CONSTRUCTION.
- FOR SIZE AND TYPE OF IRRIGATION SLEEVE, SEE IRRIGATION PLANS.

STORM DRAINAGE:

- STORM DRAIN PIPE SHALL BE CONCRETE, DUCTILE IRON, PVC, HDPE OR CMP PER THE REQUIREMENTS OF CLACKAMAS COUNTY WATER ENVIRONMENT SERVICES (WES). HDPE IS SPECIFIED ON THE PLANS, OTHER PIPE MAY BE PROPOSED IF THEY MEET THE REQUIREMENTS OF WES.
- MANHOLE BASE MAY BE POURED IN PLACE OR PRECAST CONCRETE. MANHOLE RISERS AND TOPS SHALL BE PRECAST SECTIONS WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. TOPS SHALL BE CONCENTRIC CONES EXCEPT WHERE INSUFFICIENT HEADROOM REQUIRES FLAT TOPS.
- GRANULAR BACKFILL IS TO BE COMPACTED TO MAXIMUM DRY DENSITY PER ASTM T-99 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL.
- THE CONTRACTOR SHALL TEST ALL PUBLIC PVC AND HDPE STORM PIPE AND CULVERTS FOR DEFLECTION AS PER OGD 91 STANDARD SURFACE WATER SPECIFICATION. A COPY OF THE TEST RESULTS SHALL BE SUBMITTED TO CLACKAMAS COUNTY DEPARTMENT OF WATER ENVIRONMENTAL SERVICES FOR REVIEW AND APPROVAL.
- THE CONTRACTOR SHALL FLUSH THE ENTIRE STORM DRAIN SYSTEM AND VIDEO INSPECT ALL PUBLIC STORM SEWER CONVEYANCE PIPES AND DETENTION PIPE. A COPY OF THE REPORT AND VIDEO TAPE SHALL BE SUBMITTED TO CLACKAMAS COUNTY DEPARTMENT OF WATER ENVIRONMENTAL SERVICES FOR REVIEW AND APPROVAL.
- ALL STORM DRAIN PIPES SHALL HAVE A RUBBER GASKET. ALL STORM PIPE AND RELATED CONNECTIONS TO CATCH BASINS, MANHOLES, AND OTHER RELATED STRUCTURES SHALL BE WATER TIGHT AS PER OGD 91.
- IF DURING THE COURSE OF INSTALLING UNDERGROUND UTILITIES DRAIN TILES ARE DISCOVERED, THE TILES WILL BE BROUGHT TO EXISTING STORM SEWER SYSTEM. ALL WORK SHALL BE COMPLETED BY THE CONTRACTOR AT THE OWNER'S EXPENSE.

SHEET INDEX

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C1	PROJECT SITE PLAN AND SURVEY CONTROL
C2	PLAN AND PROFILE (LINE A - STATION 22+75 TO 18+25)
C3	PLAN AND PROFILE (LINE A - STATION 18+25 TO 14+00)
C4	PLAN AND PROFILE (LINE A - STATION 14+00 TO 10+00)
C5	PLAN AND PROFILE STORM LINES "B", "C", AND "D"
C6	STORM LINE "B" PLAN AND PROFILE & FLOW CONTROL DETAILS
C7	WATER QUALITY FACILITY DETAILS
C8	NORTH POND GRADING AND EROSION CONTROL
C9	SOUTH POND GRADING AND EROSION CONTROL
C10	PLAY AREA GRADING PLAN
C11	SIEBEN PARKWAY PEDESTRIAN CROSSING PLAN
C12	STREET DETAILS
C13	STORM DRAIN DETAILS
C14	STORM DRAIN DETAILS
C15	STORM DRAIN & EROSION CONTROL DETAILS
C16	PERVIOUS SIDEWALK PLAN AND DETAILS
C17	SIDEWALK RAMP DETAILS
L1.0	PAVING PLAN
L1.1	PLAY AREA LAYOUT PLAN
L1.2	PLANTING PLAN - SUNNYSIDE PARK
L1.3	PLANTING PLAN - SIEBEN PARK
L1.4	PLANTING PLAN - SOUTH POND
L2.1	PLANTING AND IRRIGATION DETAILS
L3.1	IRRIGATION PLAN - SUNNYSIDE PARK
L3.2	IRRIGATION PLAN - SIEBEN PARK
L4.1	SITE DETAILS
E1	ABBREVIATION AND LEGEND
E2	SITE PLAN - ELECTRICAL
E3	SIEBEN PARK - SITE PLAN - ELECTRICAL
E4	DETAILS ELECTRICAL

CONTRACTOR NOTE- CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL RELOCATE ANY IN CONFLICT WITH THE PROPOSED CONSTRUCTION. CONTRACTOR TO OBTAIN ALL PERMITS FROM UTILITY OWNER. ALL WORK MUST COMPLY WITH THE UTILITY OWNER'S STANDARDS. CONTRACTOR TO NOTIFY THE ENGINEER WHEN THE SUBGRADING IS COMPLETE AND 24 HOURS PRIOR TO THE PLACEMENT OF THE FINISH GRADE. CONTRACTOR SHALL ALSO PROVIDE 24 HOUR NOTICE PRIOR TO FINAL PAVING FOR INSPECTION OF THE WORK. FAILURE TO DO SO WILL MAKE ANY SUBGRADE FAILURE OR DRAINAGE PROBLEMS THE RESPONSIBILITY OF THE CONTRACTOR.

BENCHMARK

Elevations are referenced to NAD83(17) datum, based on Horizontal Control Point No. 06138, as shown on sheet 3B of 51 of Clackamas County Survey PS-20833. The Station is a 2" diameter Aluminum cap in asphalt adjacent to 1352d 132nd Street. Elevation 381.325 feet.

AGENCY AND UTILITY CONTACT

THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF APPLICABLE GOVERNING AGENCY STANDARDS AT THE JOB SITE DURING RELATED CONSTRUCTION OPERATIONS.

CLACKAMAS COUNTY	STAN MONTE	(503) 920-0637
SUNRISE WATER AUTHORITY	DARYL ZINER	(503) 781-0220
NORTHWEST NATURAL GAS COMPANY	SCOTT PALMER	(503) 721-2449
COMCAST	KEVIN MURFORD	(503) 805-8158
PGE STREET LIGHTING	KRISTEN COOK	(503) 688-9218
PGE COMMERCIAL	RALPH GOINS	(503) 688-5278
VERIZON TELECOMMUNICATIONS	DOUG WELLMAN	(503) 687-9787
QWEST	SCOTT MILLER	(503) 242-4144
CITY OF HAPPY VALLEY	TERRY WHITEHILL	(503) 780-3325

SUNNYSIDE VILLAGE GREEN

TITLE SHEET
 WATER ENVIRONMENT SERVICES
 CLACKAMAS COUNTY, OREGON



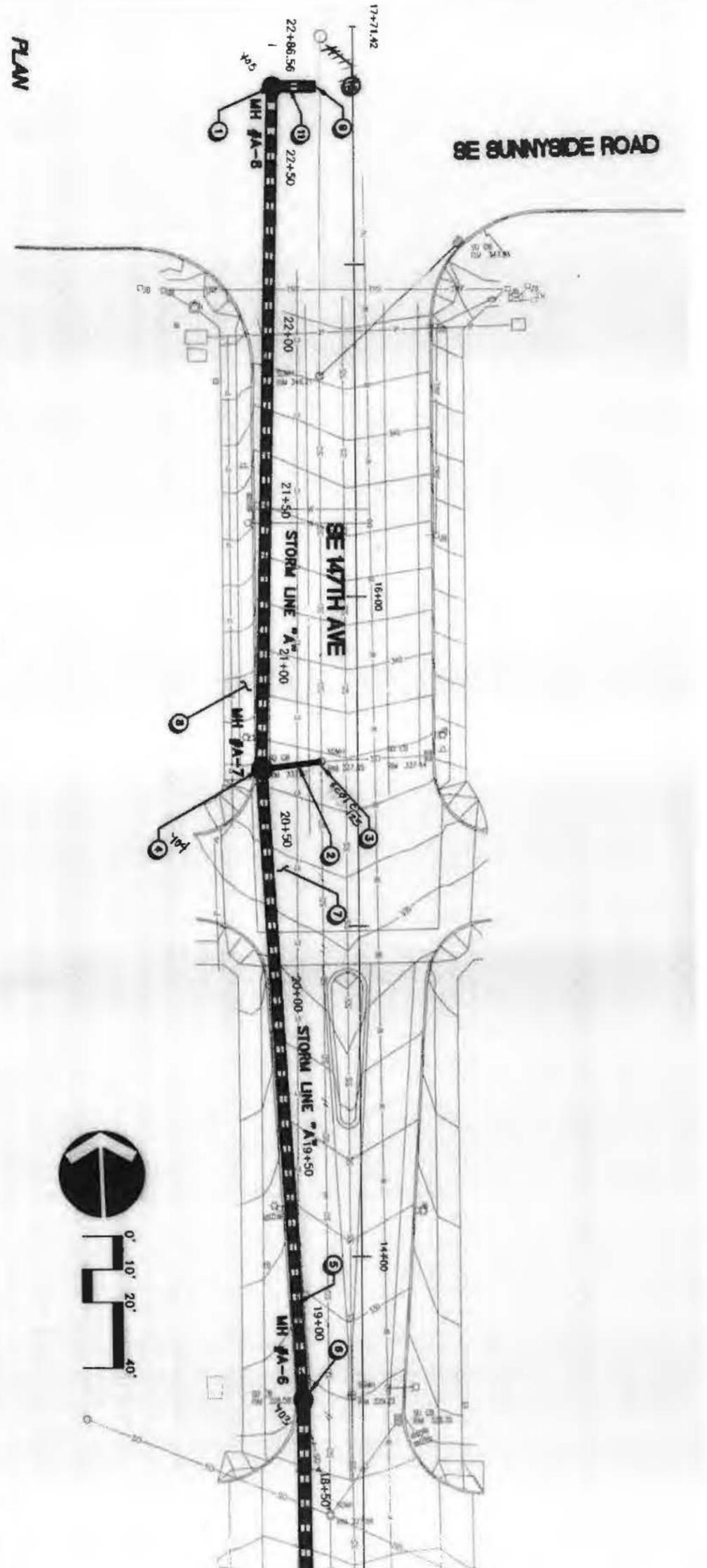
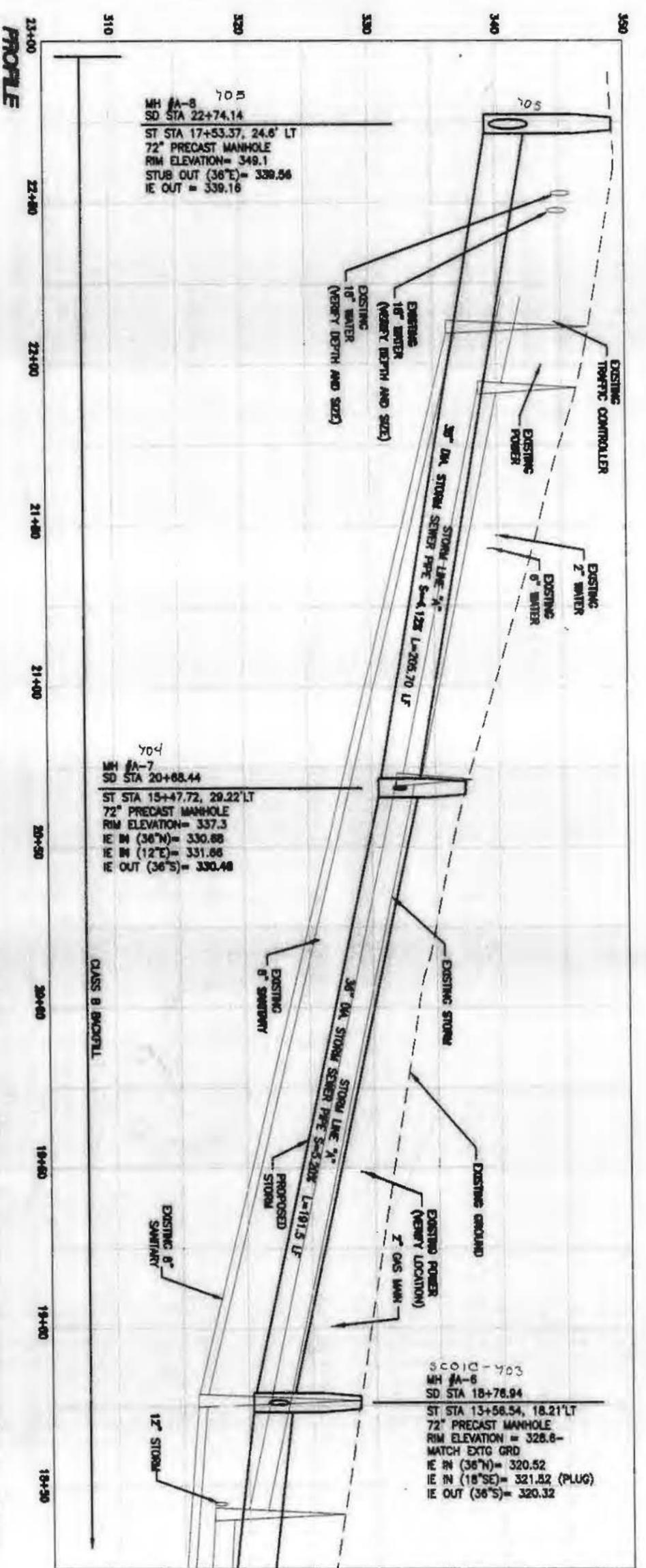
105 W. Evergreen Blvd. #200
 Vancouver, WA 98686-3123
 Phone: (509) 737-9813
 Fax: (509) 737-9811
 Internet: WWW.OUK.COM

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T1

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- CONSTRUCTION NOTES**
- INSTALL 72" DIAMETER CONCRETE MANHOLE WITH INLET. COORDINATE CONNECTION OF STORM SYSTEM TO NEW STORM SYSTEM ALONG SE SUNNYSIDE ROAD.
 - INSTALL 18 1/2" STORM SEWER PIPE S-4.125
 - PLUG EXISTING STORM SEWER PIPE SOUTH. CONNECT 18" STORM SEWER PIPE AT EXISTING OUTLET ELEVATION.
 - REMOVE EXISTING CATCH BASIN. INSTALL 72" DIAMETER CONCRETE MANHOLE WITH INLET. RECONSTRUCT EXISTING CURB AS REQUIRED.
 - RELOCATE EXISTING GAS LINE AS REQUIRED (BY OTHERS) COORDINATE WORK WITH UTILITY CREWS.
 - REMOVE EXISTING CATCH BASIN. INSTALL 72" DIAMETER CONCRETE MANHOLE WITH INLET. RECONSTRUCT EXISTING CURB AS REQUIRED.
 - REMOVE EXISTING FINISHED SURFACES AS REQUIRED.
 - WHERE EXISTING SIDEWALK IS DAMAGED BY CONSTRUCTION, REMOVE EXISTING SIDEWALK TO NEAREST EXISTING TYPICAL JAWIT. REPLACE SIDEWALK PER CLACKAMAS COUNTY STD. DRG. 5904.
 - CONNECT 36" DIAMETER STORM SEWER PIPE TO EXISTING 36" STORM SEWER PIPE. CUT AND PLUG EXISTING 18" STORM SEWER PIPE.
 - ABANDON EXISTING CATCH BASIN. PLUG EXISTING 15" STORM SEWER LINE AT CATCH BASIN.
 - INSTALL 12" LF 36" DIAMETER STORM SEWER PIPE AT 18+25.77 STATION. ADJUST UPSTREAM INVERT AND PIPE LENGTH FOR POSITIVE CONNECTION TO EXISTING 36" DIAMETER STORM SEWER PIPE.

These As-Built Plans were compiled from survey data, data collected from others, and periodic observation during construction. It is suggested that these plans be used in conjunction with field verification of location and elevations of improvements in question. These plans are an accurate record of public improvements to the best of my information, knowledge and belief.

Robert N. Vandy
1-3-05

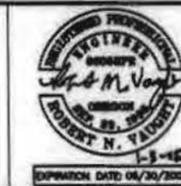
"AS-BUILT"
ONE YEAR WARRANTY

OLEIK
Incorporated

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Vancouver, WA 98666-5225
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11236 CE04
Project No. Drawing No.
C2

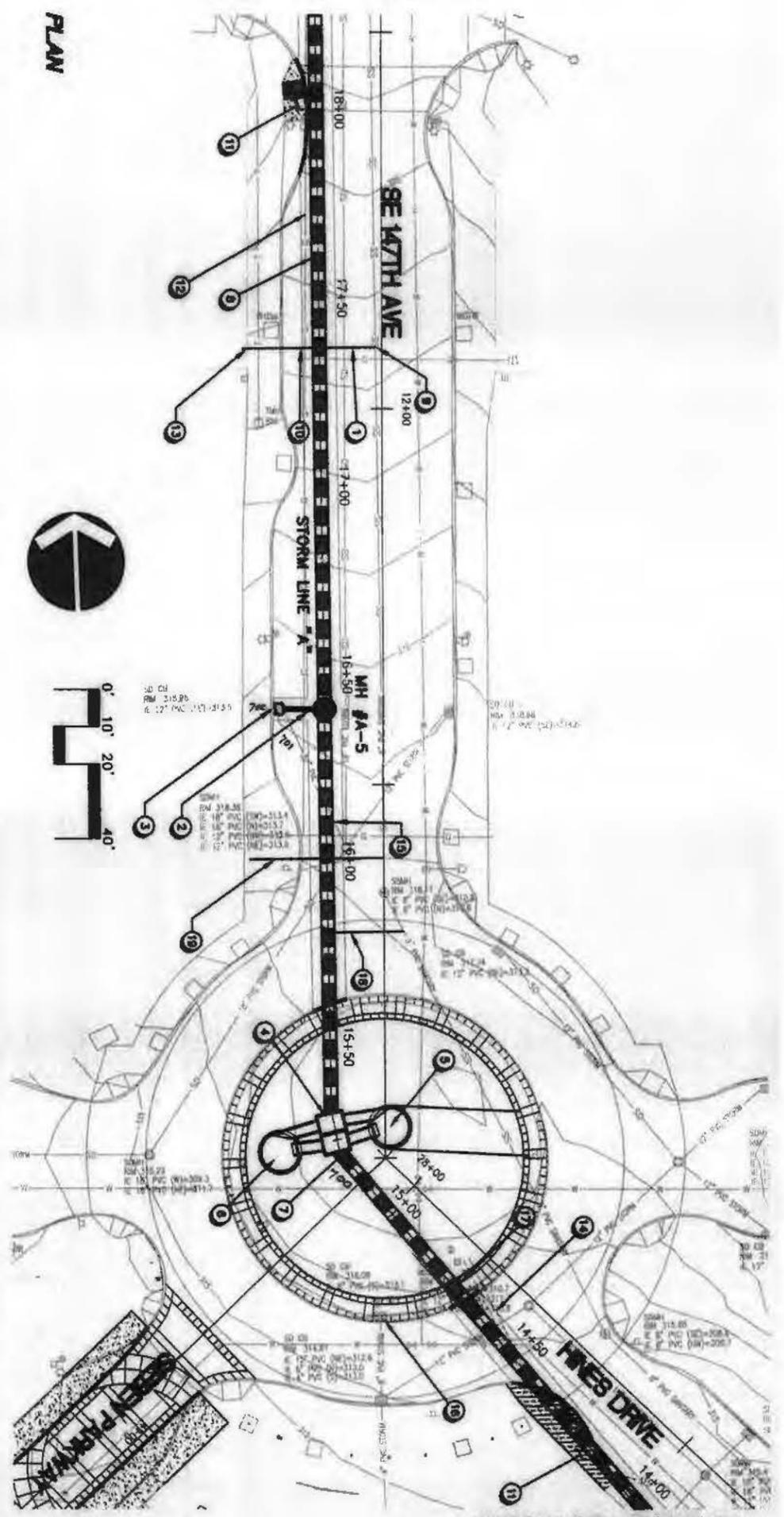
SUNNYSIDE VILLAGE GREEN
PLAN AND PROFILE (LINE A- STATION 22+75 TO 18+25)
WATER ENVIRONMENT SERVICES
CLACKAMAS COUNTY, OREGON



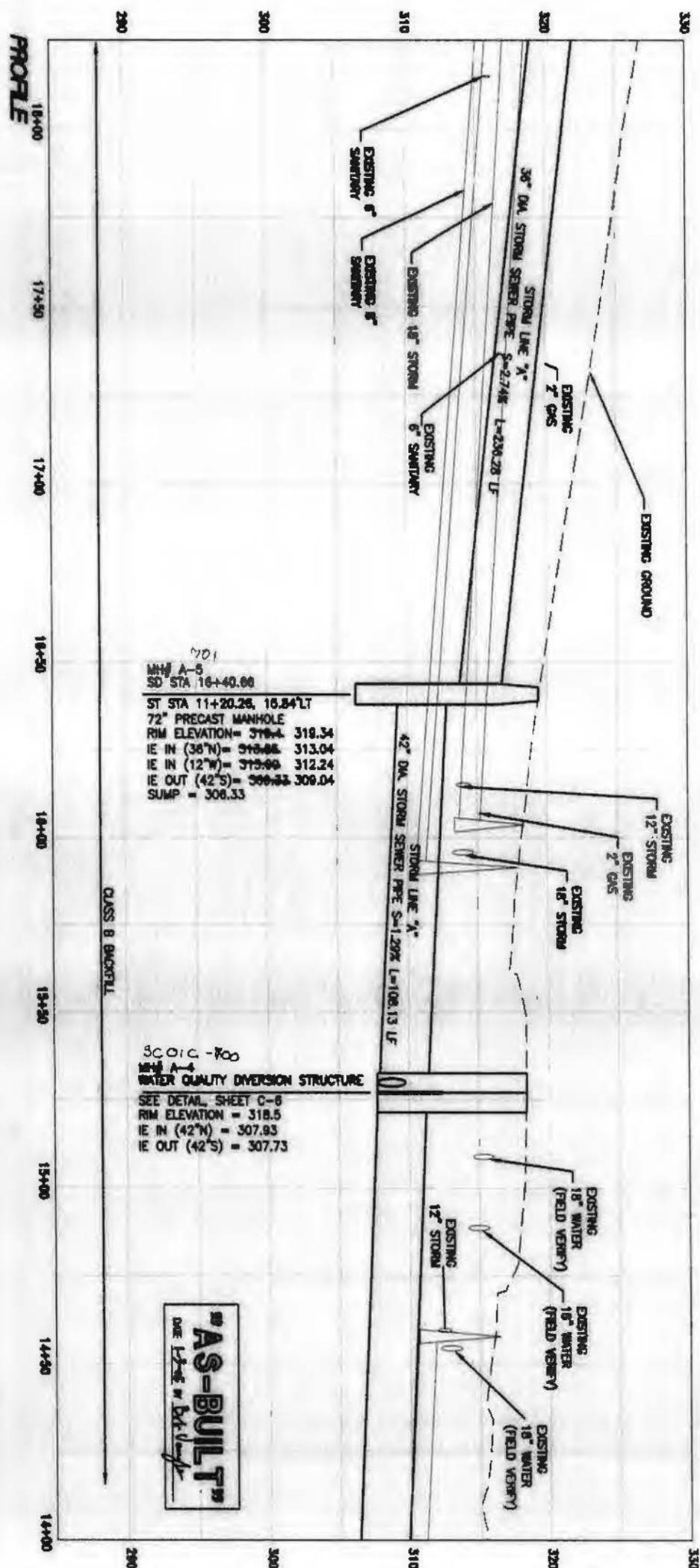
NO.	DATE	BY	REVISION COMMENTS

Design: _____ Drawn: _____ Checked: _____ Date: _____ Initial Issue Date: July 24, 2003

MATCH LINE- SHEET C2



MATCH LINE- SHEET C4



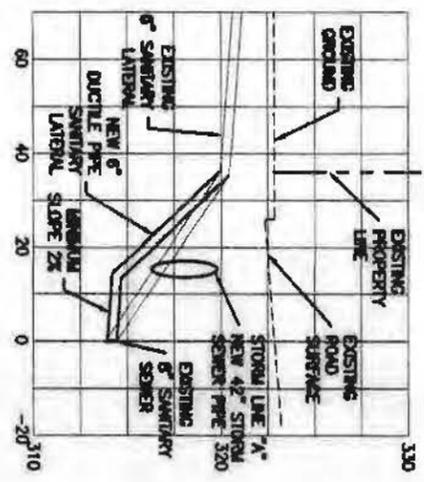
MH #A-5
SD STA 16+40.00
ST STA 11+20.26, 16.84*LT
72" PRECAST MANHOLE
RIM ELEVATION = 318.4 318.34
IE IN (36"N) = 318.88 313.04
IE IN (12"W) = 319.88 312.24
IE OUT (42"S) = 308.33 308.04
SUMP = 308.33

SC01C - 700
MH #A-4
WATER QUALITY DIVERSION STRUCTURE
SEE DETAIL SHEET C-8
RIM ELEVATION = 318.5
IE IN (42"N) = 307.93
IE OUT (42"S) = 307.73



CONSTRUCTION NOTES

- 1 REMOVE EXISTING 8-INCH SANITARY SEWER LATERAL TO AVOID PROPOSED STORM SEWER PIPE. RECONSTRUCT WITH 6" DUCTILE IRON PIPE AT LOWER DEPTH AS SHOWN IN SANITARY CONNECTION PROFILE BELOW.
- 2 11 LF 12-INCH STORM SEWER PIPE S-4.42%.
- 3 72" DIAMETER CONCRETE MANHOLE.
- 4 DISCONNECT EXISTING STORM SEWER PIPE FROM EXISTING CATCH BASIN. INSTALL RIBB AS REQUIRED TO REINFORCE WHEN FROM EXISTING DISCONNECTED PIPE. RECONNECT CATCH BASIN TO NEW 12" STORM SEWER PIPE.
- 5 RISE TO WATER QUALITY DIVERSION STRUCTURE MH#A-4 SD STA 16+40.00, 14.50*LT SEE DETAIL SHEET C7 FOR DETAILS OF WATER QUALITY FACILITY.
- 6 WATER QUALITY FACILITY "A".
- 7 ST STA 10+01.26, 1.80% RISE-SHADE SIGNS.
- 8 WATER QUALITY FACILITY "A".
- 9 ST STA 10+01.26, 2.84% RISE-SHADE SIGNS.
- 10 OUTLET FROM WATER QUALITY DIVERSION STRUCTURE SD STA 19+21.52.
- 11 ST STA 10+01.26, 1.24% RISE.
- 12 SANDOUT EXISTING FINISHED SURFACE AS REQUIRED. COORDINATE WORK WITH UTILITY CREWS.
- 13 RECONNECT NEW 6" SANITARY LATERAL TO EXISTING 6" SANITARY SEWER.
- 14 VERTICALLY DISPLACE NEW 6" SANITARY LATERAL UNDER NEW 42" STORM SEWER PIPE.
- 15 REMOVE EXISTING SIDEWALK IS DAMAGED BY CONSTRUCTION. REPAIR EXISTING SIDEWALK TO REAREST EXISTING TOILED CURB. REPLACE SIDEWALK PER CLACKAMAS COUNTY STD. Dwg. 5800 AND AS REQUIRED IN SPECIAL PROVISIONS.
- 16 REDUCATE EXISTING 2" GAS MAIN AS REQUIRED.
- 17 RECONNECT TO EXISTING SANITARY SEWER LATERAL AT PROPERTY LINE.
- 18 CONTRACTOR SHALL NOTE SCHEDULE 40 PVC BLETTE FOR PENETRATION PIPE IS SHOWN HERE AND ON SHEETS C3 AND C4. CONTRACTOR SHALL VERIFY DETAIL FOR INSTALLATION OF THIS SIZE FOR REVIEW AND APPROVAL.
- 19 REMOVE EXISTING STORM SEWER PIPE AS REQUIRED AND FILL PIPE END.
- 20 MAINTAIN AND PROTECT EXISTING CATCH BASIN.
- 21 DISCONNECT EXISTING WATER LETTER PER SANITARY WATER AUTHORITY STANDARDS.
- 22 EXISTING SANITARY SEWER CONFLICT ROAD WITH PROPOSED STORM SEWER. SANITARY LINE ABANDONED AND FILLING.
- 23 NEW 6" DUCTILE IRON PIPE SANITARY LATERAL EXTENDED TO PROPERTY LINE.



SANITARY CONNECTION PROFILE

NOT TO SCALE

These As-Built Plans were compiled from survey data, data obtained from utility, and public information during construction. It is suggested that these plans be used in conjunction with field verification of location and dimensions of improvements in question. These plans are on records subject of public improvements to the best of my information, knowledge and belief.

SUNNYSIDE VILLAGE GREEN

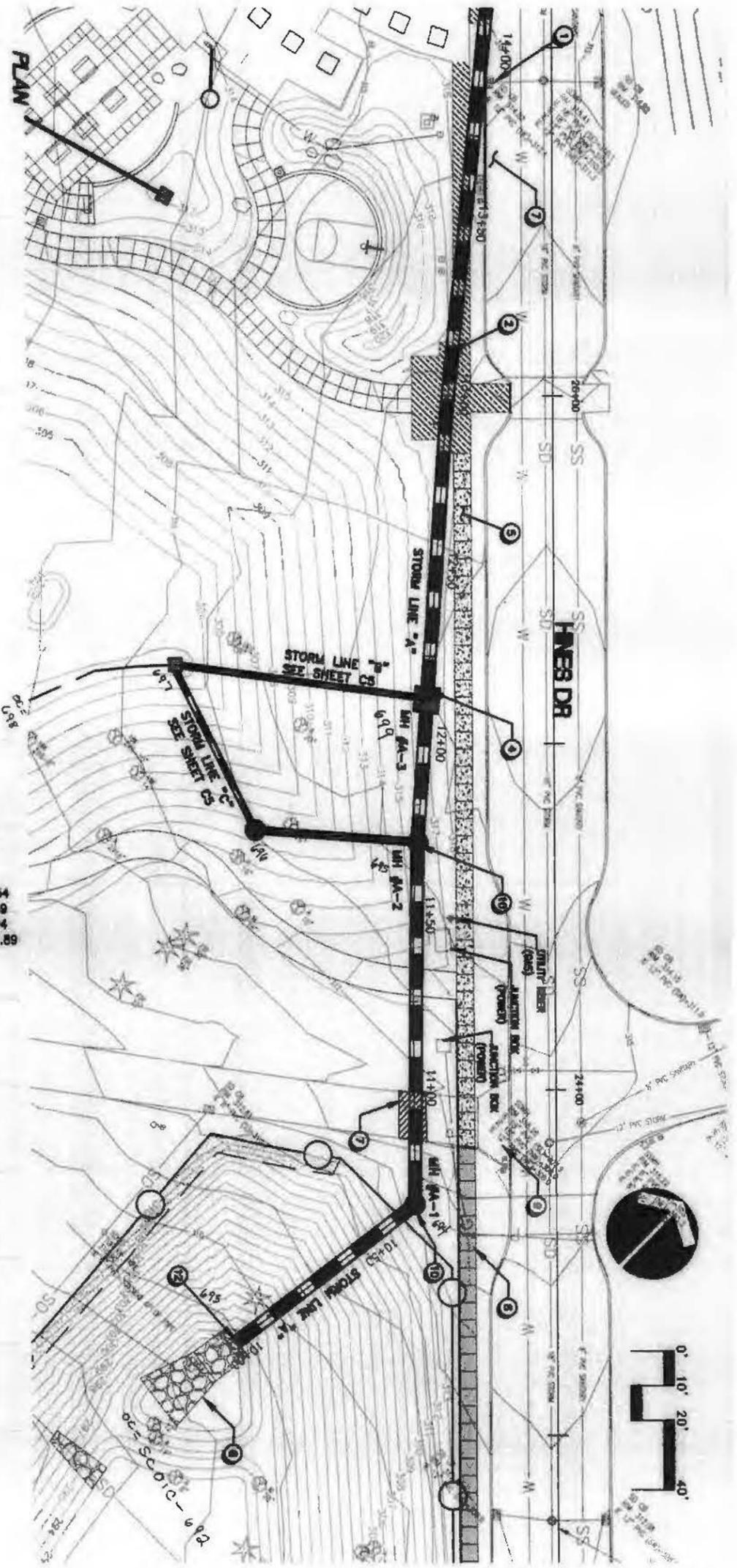
PLAN AND PROFILE (LINE A- STATION 18+25 TO 14+00)
WATER ENVIRONMENT SERVICES
CLACKAMAS COUNTY, OREGON



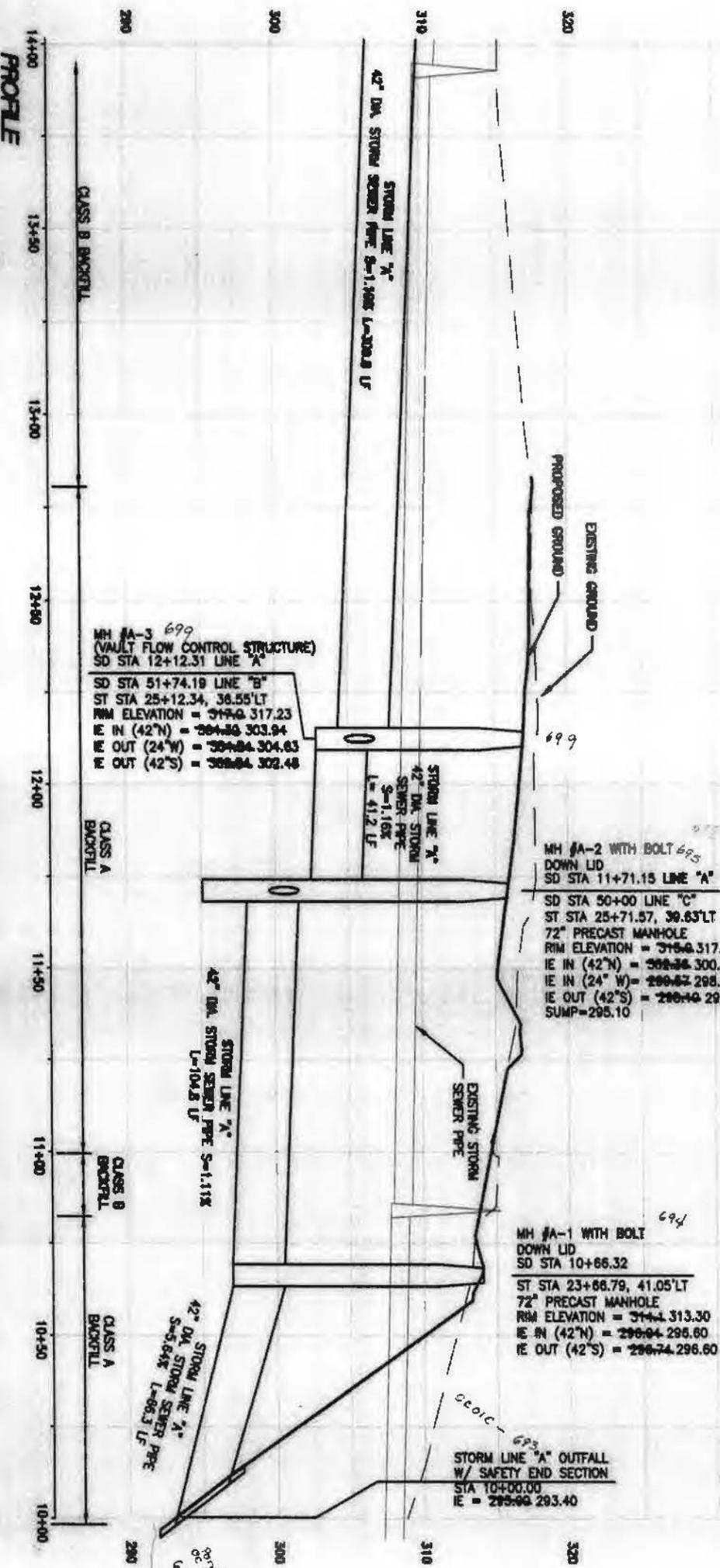
NO.	DATE	BY	REVISION COMMENTS

Design: SKC, Drawn: SKC, Checked: SKC, Date: July 24, 2003, Initial Issue Date: July 24, 2003

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11236 CE04
Project No. Drawing No. C3



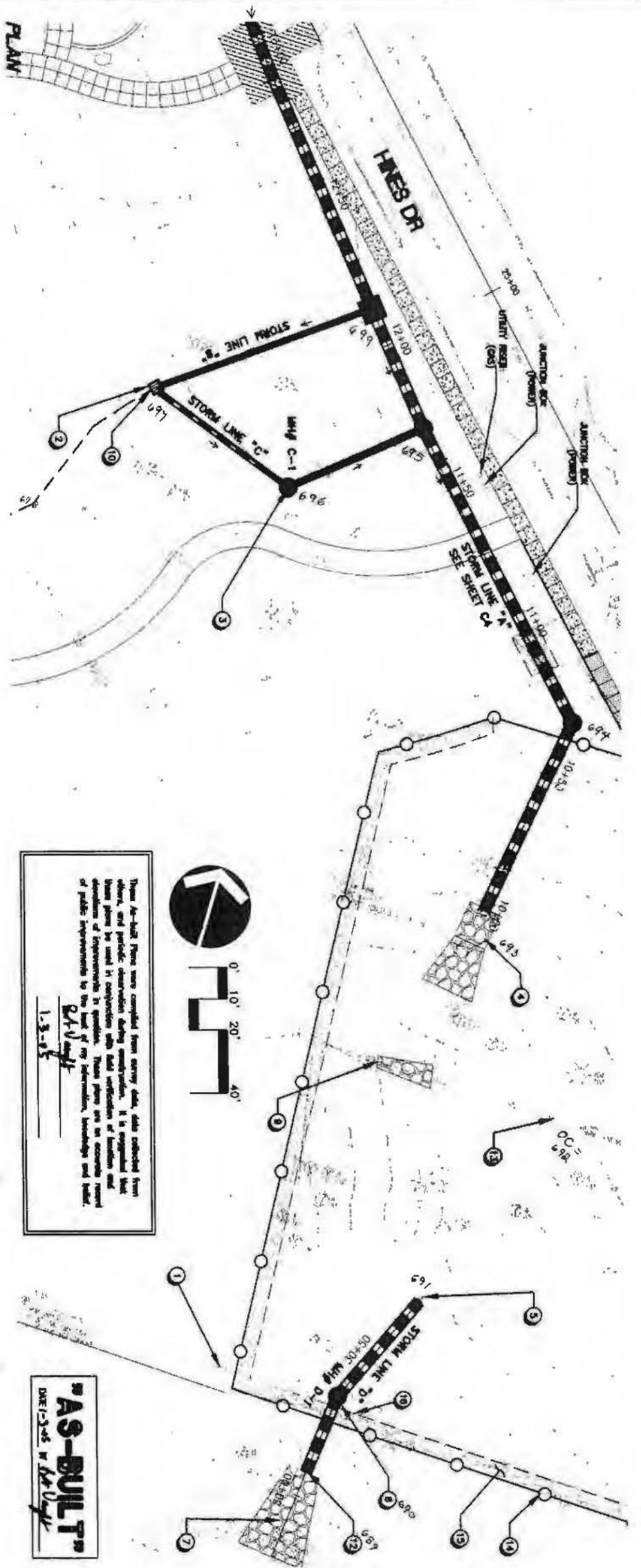
- CONSTRUCTION NOTES**
- RECONSTRUCT EXIST. CATCH BASIN AFTER INSTALLATION OF STORM SEWER PIPE "A".
 - WHERE EXISTING SEWER IS DAMAGED BY CONSTRUCTION, REMOVE EXISTING SEWER TO NEAREST EXISTING TOILET JOINT. REPLACE SEWER PER CLACKAMAS COUNTY STD DRG. SPEC.
 - INSTALL VAULT FLOW CONTROL STRUCTURE MH #A-3 SEE DETAIL SHEET CA.
 - NEW STANDARD SEWER SET SHEET CA.
 - INSTALL NEW CATCH BASIN FOR STORM LINE "A". SEE DETAIL SHEET CA.
 - REMOVE EXISTING FRESH SURFACE AS REQUIRED AND REPAIR TO ORIGINAL CONDITION.
 - INSTALL PORTLAND CEMENT CONCRETE SEWER SET SHEET CA.
 - PROTECT EXISTING DRAINAGE DITCH.
 - INSTALL 12" CONCRETE MANHOLE.



These As-Built Plans were compiled from survey data, data obtained from others, and public information during construction. It is recognized that some plans be used in conjunction with the verification of location and dimensions of improvements to the best of my knowledge, skill and judgment and that of public improvements to the best of my knowledge, skill and judgment.

Bob Vandyke

"AS-BUILT"
DATE: 11/23/03 BY: [Signature]

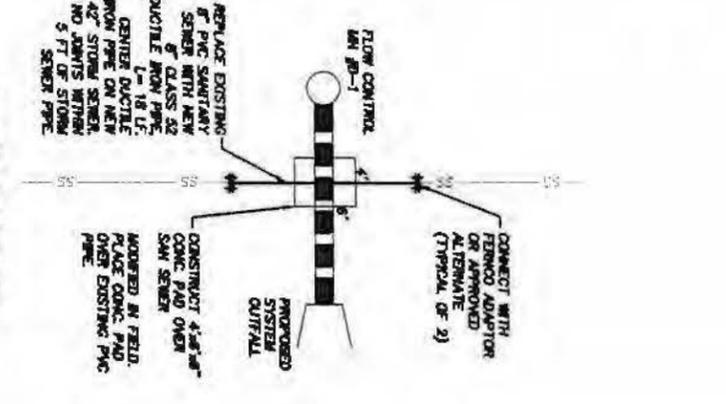
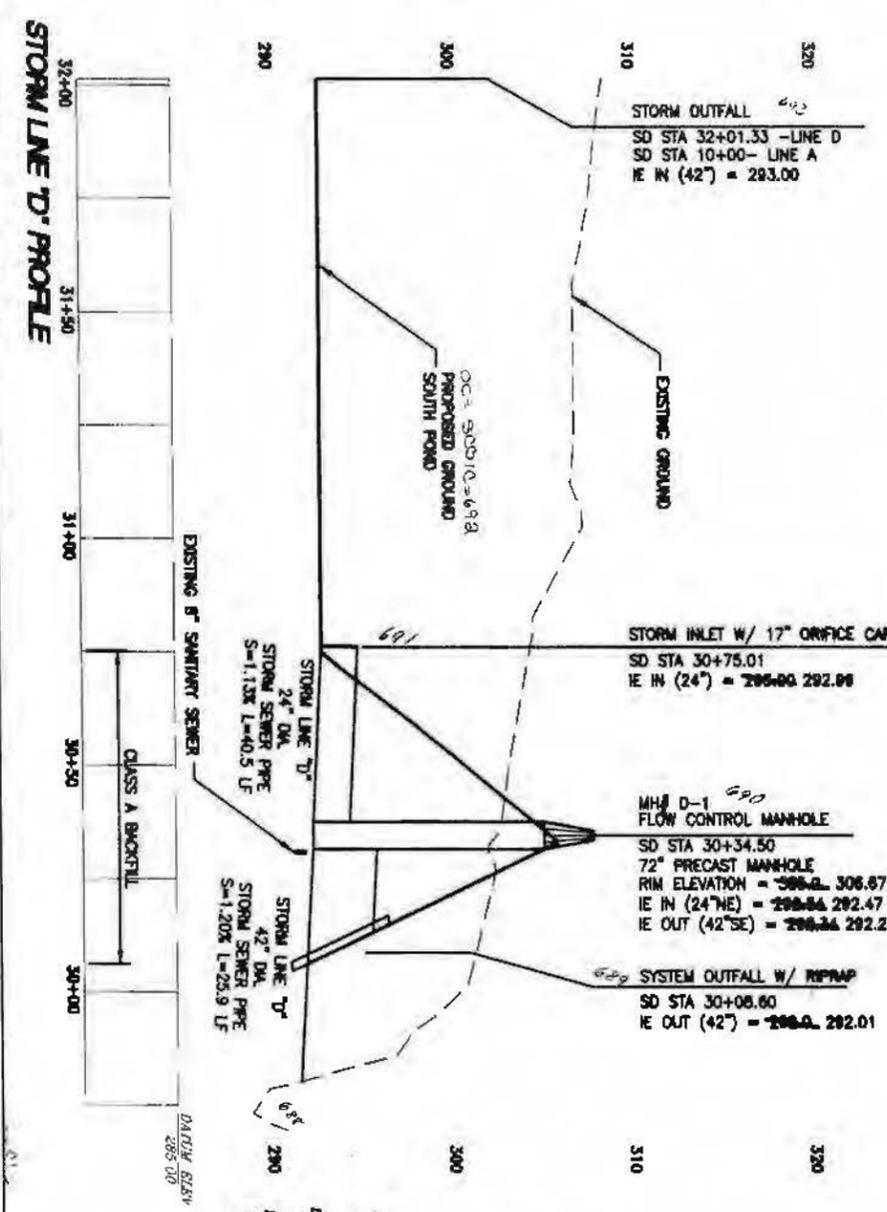
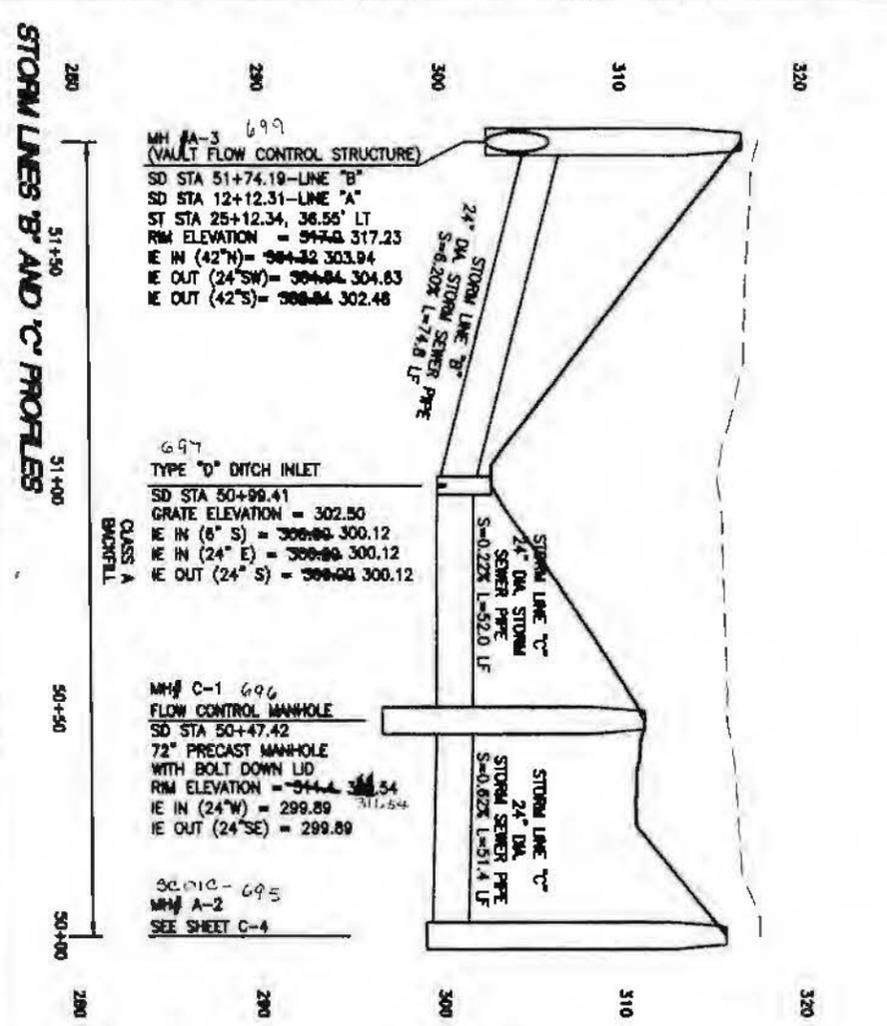


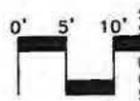
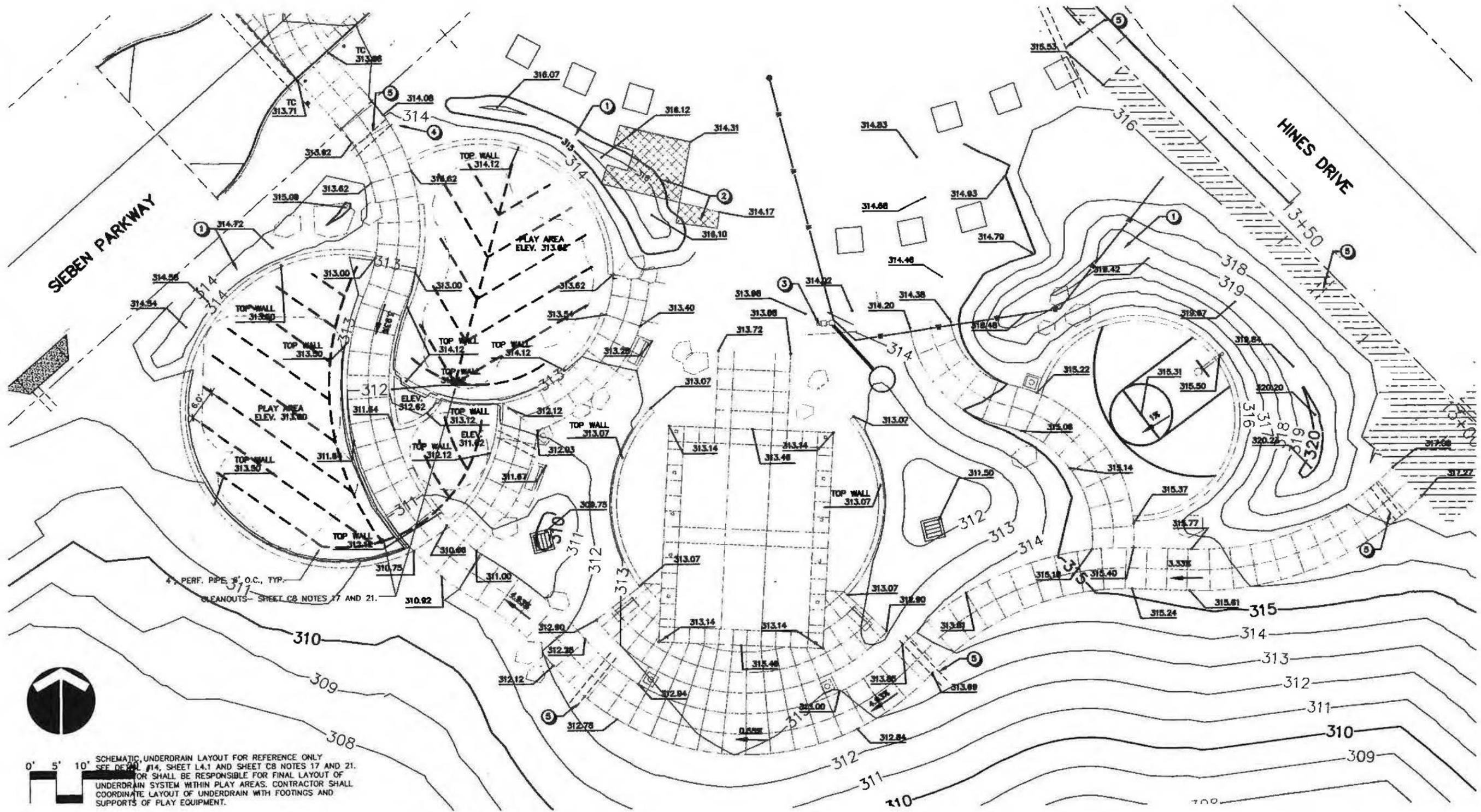
These As-Built Plans were compiled from survey data, data collected from other, and periodic observation during construction. It is suggested that these plans be used in conjunction with field verification of location and dimensions of improvements in question. These plans are an accurate record of public improvements to the level of my observation, knowledge and belief.

Robert H. Young
 1-3-03

"AS-BUILT"
 DATE: 3-3-03 BY: *Robert H. Young*

- CONSTRUCTION NOTES**
- POT-HOLE PRIOR TO RECOMMENDING STORM SEWER AND GRADING WORK TO VERIFY SANITARY SEWER ELEVATION AND LOCATION.
 - INSTALL TYPE "D" DITCH INLET. FINISH GRADE TO BE FLUSH WITH TOP BOX OF DITCH INLET. SEE DETAIL SHEET C12.
 - FLOW CONTROL STRUCTURE MH-C-1. SEE DETAIL SHEET C14.
 - INSTALL RIPPAP BASIN FOR STORM LINE A. SEE DETAIL SHEET C14.
 - INSTALL 17" DIA. ORIFICE CAP OVER 24" PIPE ENL.
 - INSTALL FLOW CONTROL STRUCTURE MH-D-1. SEE DETAIL SHEET C14.
 - INSTALL RIPPAP BASIN FOR STORM LINE D. SEE DETAIL SHEET C14.
 - CONTRACTOR TO DAHLIGHT EXISTING STORM SEWER PIPE. INSTALL RIPPAP BASIN FOR OFFSITE OUTFALL TO BOTTOM OF PROPOSED FACILITY. SEE DETAIL SHEET C14.
 - CONNECT 8" DRAIN PIPE TO TYPE "D" DITCH INLET.
 - INSTALL 42" SAFETY INLET WITH C14 PAVED ENL. SEE DETAIL SHEET C14.
 - REMOVE EXISTING STORM DRAIN LINE.
 - CHAIN LINK FENCE SEE DETAIL SHEET C14.
 - 5' WIDE, 1' DEPTH GRAVEL PATH INSIDE FENCE ALONG SOUTH AND WEST SIDES AS SHOWN. (SEE ALSO SHEET C14)





SCHEMATIC UNDERDRAIN LAYOUT FOR REFERENCE ONLY
 SEE DETAIL #14, SHEET L4.1 AND SHEET C8 NOTES 17 AND 21.
 CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL LAYOUT OF
 UNDERDRAIN SYSTEM WITHIN PLAY AREAS. CONTRACTOR SHALL
 COORDINATE LAYOUT OF UNDERDRAIN WITH FOOTINGS AND
 SUPPORTS OF PLAY EQUIPMENT.

CONSTRUCTION NOTES

- ① CONSTRUCT LANDSCAPE BERM. SEE DETAILS SHEET L4.1.
- ② SAW CUT AND REMOVE EXISTING SIDEWALK.
- ③ CONSTRUCT CONCRETE SLAB FOR DRINKING FOUNTAIN. SEE DETAILS SHEET L4.1.
- ④ RELOCATE EXISTING IRRIGATION CONTROLLERS.
- ⑤ INSTALL SLEEVE FOR IRRIGATION SYSTEM PER SHEET L3.1.

NO.	DATE	BY	REVISION COMMENTS



SUNNYSIDE VILLAGE GREEN

PLAY AREA GRADING PLAN
 WATER ENVIRONMENT SERVICES
 CLACKAMAS COUNTY, OREGON

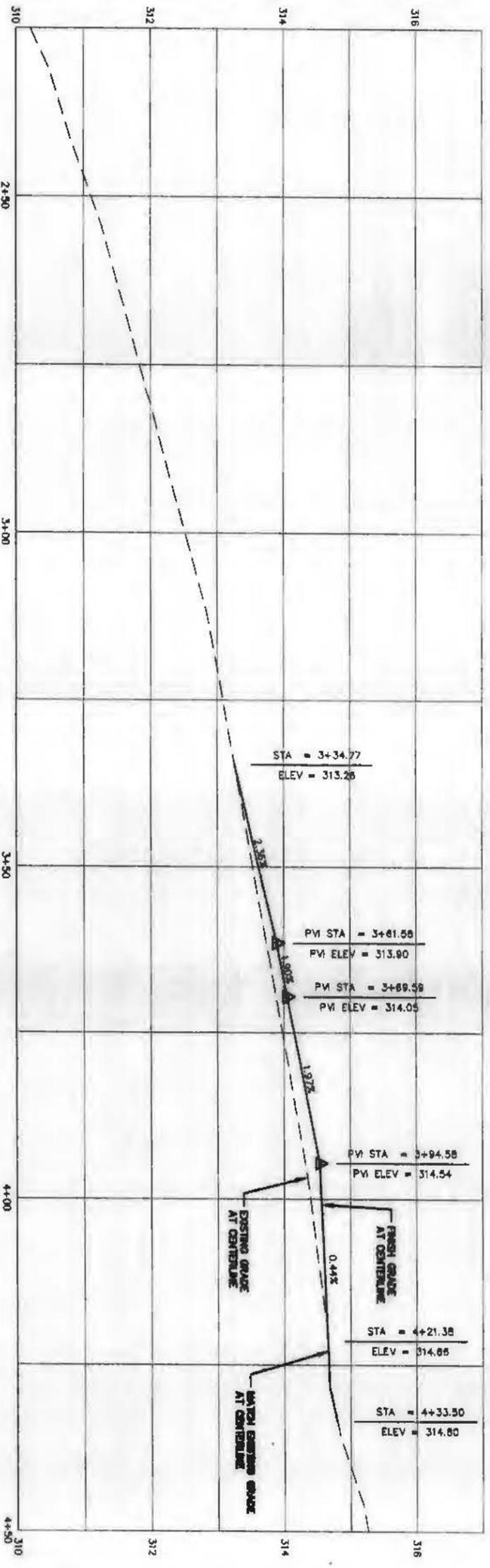
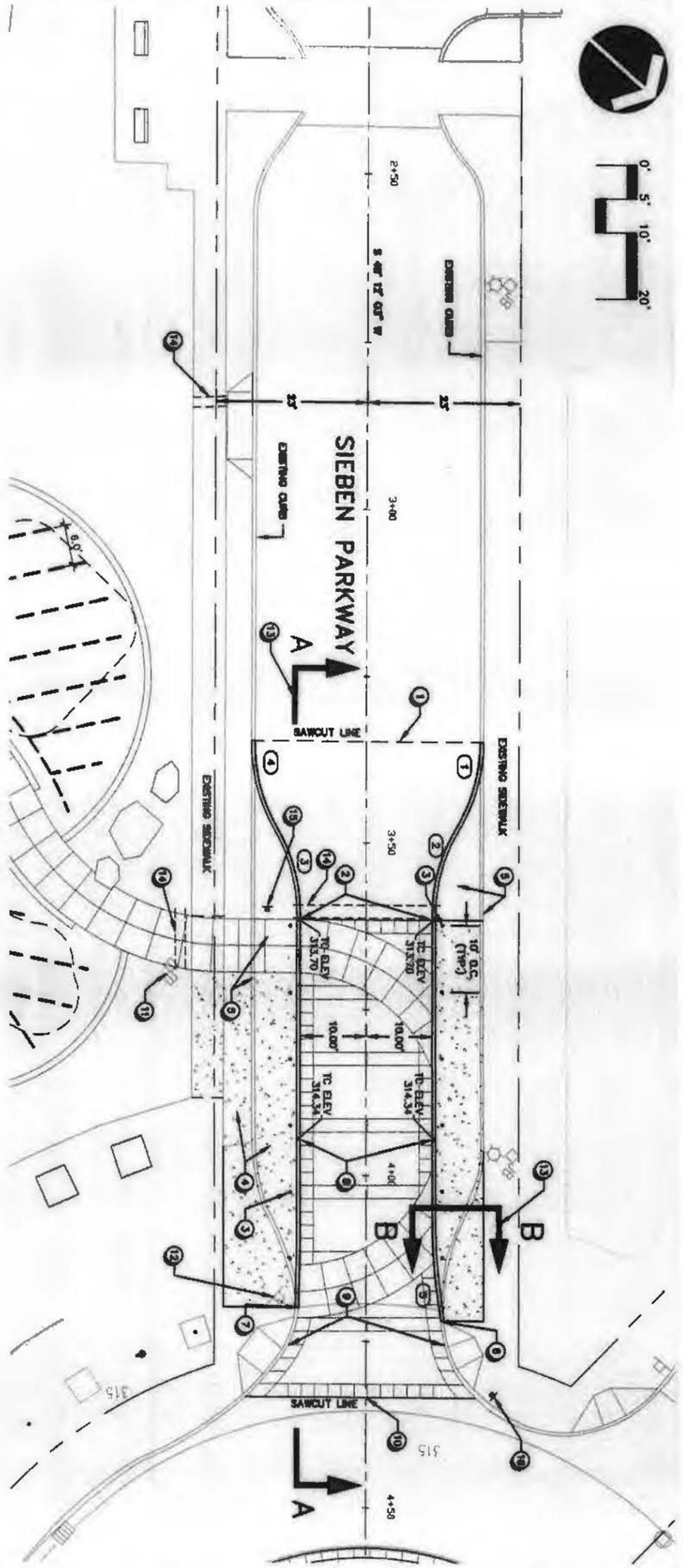
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C10
 Sheet No.
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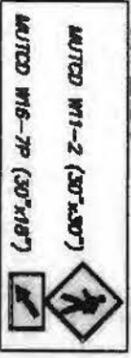


PROFILE VIEW
SCALE: 1"=10' HOR., 1"=4' VERT.

CONSTRUCTION NOTES

- 1 STA 3+34.77, SAWCUT AND MATCH EXISTING CURB AND PAVEMENT. SEEN PAVEMENT TRANSITION FROM 6" DEPOSURE CURB TO 0" DEPOSURE CURB AT RANDED PEDESTRIAN CROSSING.
- 2 STA 3+41.98, END PAVEMENT TRANSITION. SEEN RANDED PEDESTRIAN CROSSING FOR DETAIL ON SHEET C12.
- 3 INSTALL BOLLARDS 2' O.C. FROM FACE OF CURB PER LANDSCAPE DETAIL SHEET 141 (TYP.)
- 4 CONSTRUCT 6" THICK CONCRETE SIDEWALK PER LANDSCAPE DETAIL SHEET 141.
- 5 SAWCUT AND REMOVE EXISTING CURB AND ASPHALT SURFACING.
- 6 STA 4+11.47, END CURB CONSTRUCTION LEFT. MATCH DETAIL.
- 7 STA 4+18.66, END CURB CONSTRUCTION RIGHT. MATCH DETAIL.
- 8 STA 3+14.48, SEEN PAVEMENT TRANSITION FROM 0" DEPOSURE CURB TO 6" DEPOSURE CURB. MATCH EXISTING PAVEMENT.
- 9 STA 4+25.79, END PAVEMENT TRANSITION. MATCH EXISTING PAVEMENT.
- 10 STA 4+32.98, END RANDED PEDESTRIAN CROSSING FOR DETAIL ON SHEET C12. SAWCUT AND MATCH EXISTING CONCRETE PAVEMENT.
- 11 RELOCATE AND ADJUST EXISTING WATER LETTERS TO FURNISH GRADE.
- 12 REMOVE AND RELOCATE EXISTING SIGN AS DIRECTED BY OWNER.
- 13 SET SHEET C12 FOR SECTIONS A-A AND B-B.
- 14 INSTALL SLEEVE FOR SIGNALING SYSTEM PER SHEET L41.
- 15 STA 3+49.15, 15' RT INSTALL AUTO SIGN W1-2 & W1-7P AS SHOWN BELOW FACING APPROACHING TRAFFIC. COORDINATE SIGN PLACEMENT WITH BUREAU OF HIGHWAY DESIGN. STA 4+41.16, 15' LT INSTALL AUTO SIGN W1-2 & W1-7P AS SHOWN BELOW FACING APPROACHING TRAFFIC. COORDINATE SIGN PLACEMENT WITH BUREAU OF HIGHWAY DESIGN.

SIGN LEGEND



CURB CURVE TABLE
SIEBEN PARKWAY

1	PO-3+34.77, 17.48' RT PO-3+47.02, 11.25' LT A = 37.07° R = 25.00' L = 11.88'
2	PO-3+47.02, 11.25' LT PO-3+60.58, 10.00' LT A = 37.07° R = 25.00' L = 11.88'
3	PO-3+60.58, 10.00' RT PO-3+72.81, 11.88' RT A = 27.07° R = 25.00' L = 12.24'
4	PO-3+72.81, 11.88' RT PO-3+85.28, 16.88' RT A = 27.07° R = 25.00' L = 12.24'
5	PO-4+07.07, 16.88' LT PO-4+21.87, 11.37' LT A = 107°23' R = 68.00' L = 14.88'

SUNNYSIDE VILLAGE GREEN

SIEBEN PARKWAY PEDESTRIAN CROSSING PLAN
WATER ENVIRONMENT SERVICES
CLACKAMAS COUNTY, OREGON

OTAK
Incorporated

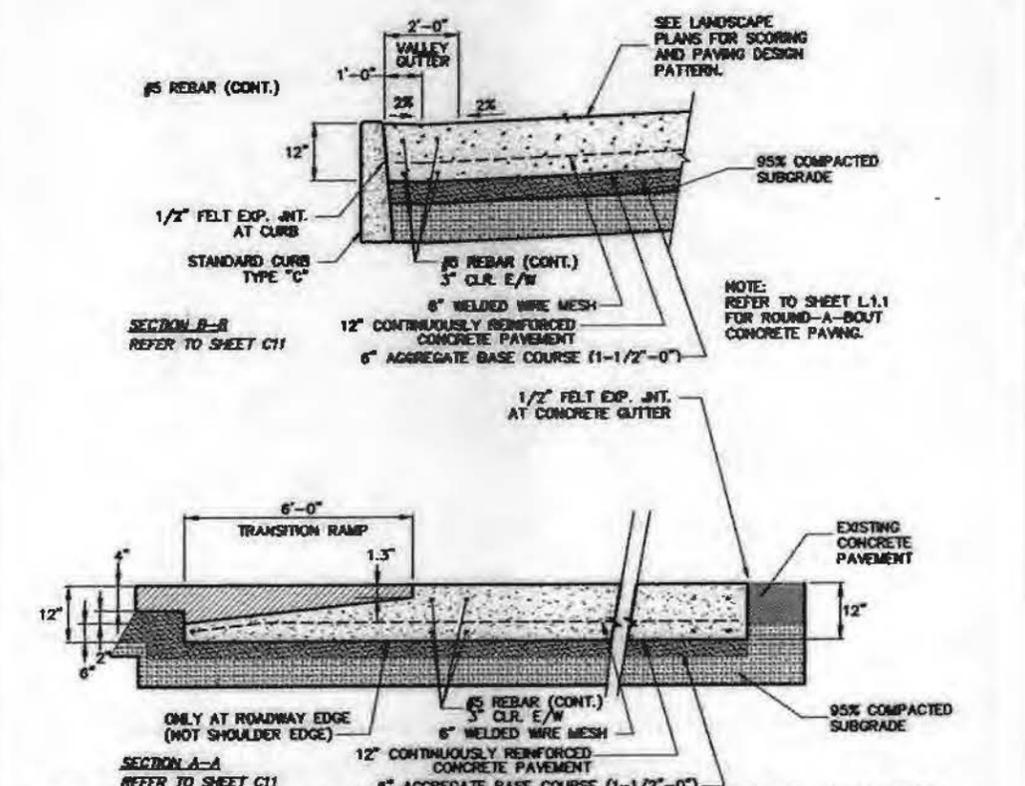
105 W. Evergreen Blvd. #300
Vancouver, WA 98660-3123
Phone: (360) 737-8813
FAX: (360) 737-8031
Internet: WWW.OTAK.COM

11236 OE04
Project No. Drawing No.
C11

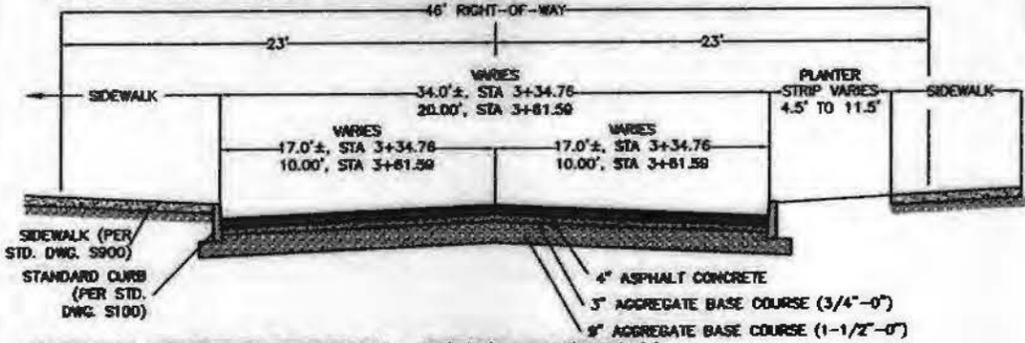


NO.	DATE	BY	REVISION COMMENTS

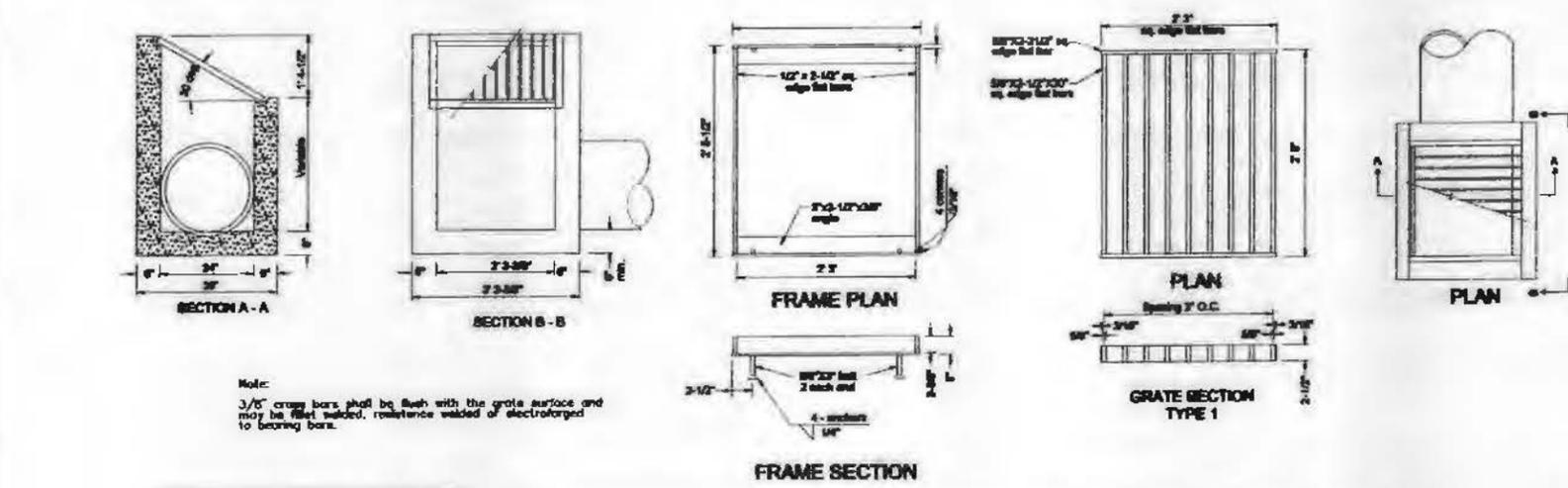
Design: JGN, Drawn: JGN, Checked: JGN, Date: July 24, 2003, Issue Date: July 24, 2003



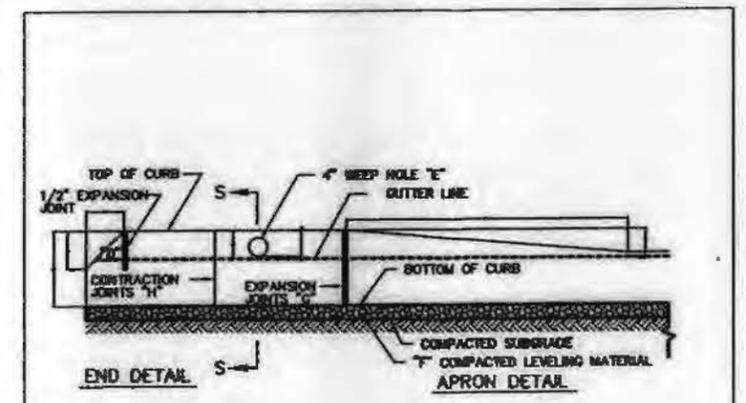
RAISED PEDESTRIAN CROSSING AND ROUND-A-BOUT CONCRETE PAVING
STATION 3+81.50 TO 4+33.50, NOT TO SCALE



TYPICAL STREET SECTION - SEBEN PARKWAY
STATION 3+34.76 TO 3+61.50, NOT TO SCALE



TYPE 'D' DITCH INLET
NTS

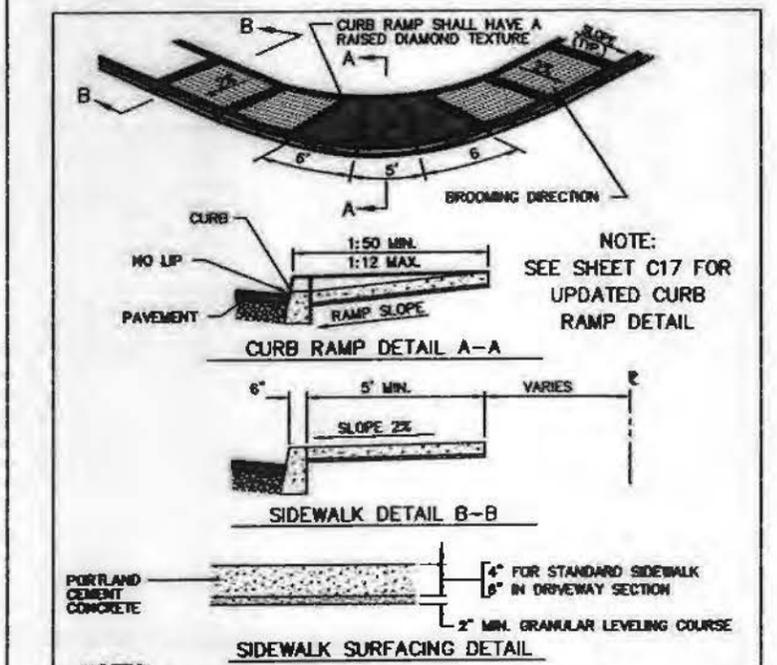


NOTES:

- "A" CURB EXPOSURE, STANDARD 6", VARY AS SHOWN ON TYPICAL SECTION, OR AS DIRECTED.
- "B" CURB EXPOSURE ADJACENT TO DRIVEWAY, STANDARD 1", OR AS DIRECTED.
- "C" DRIVEWAY APRON, STANDARD RESIDENTIAL & COMMERCIAL 5" MIN, OR AS DIRECTED.
- "D" END CURB SECTION, TOP TO BE REMOVED UPON EXTENSION OF CURB.
- "E" DEEP HOLE, 4" PLASTIC DRAIN PIPE OR APPROVED EQUIVALENT, LOCATED AS INDICATED ON THE PLANS OR AS DIRECTED. DRAIN PIPE SHALL HAVE A BELL OR A 3" EXTENSION, FOR FUTURE HOOD-UP.
- "F" LEVELING COURSE, 3/4"-0" OR 1/2"-0" CRUSHED ROCK, 4" MIN.
- "G" EXPANSION JOINTS, MAX. 45' SPACING AND AT BEGINNING AND END OF CURVES OR AS DIRECTED.
- "H" CONTRACTION JOINTS, MAX. 15' SPACING AND AT LOCATIONS AS DIRECTED.

2. CURB TO BE CLASS 5300 PORTLAND CEMENT CONCRETE.
3. CONCRETE AND MISC. MATERIALS USED IN CURB CONSTRUCTION SHALL CONFORM TO CURRENT APWA STANDARD SPECIFICATIONS.

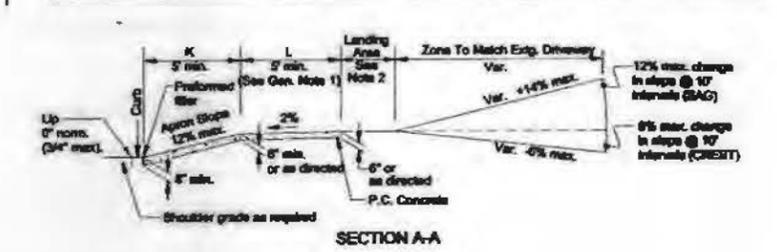
CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	STANDARD VERTICAL CURB TYPE "C"	S100
		1-1-99 N.T.S.



NOTES:

- FOR CONCRETE AND MISC. MATERIALS USED IN CONSTRUCTION SHALL CONFORM TO CURRENT APWA STANDARD SPECIFICATIONS.
- EXPANSION JOINT EVERY 45' MIN OR AT EQUAL INTERVALS CORRESPONDING TO CURB LINE. CONTRACTION JOINT EVERY 15'. TOOLED JOINT EVERY 5 FEET.
- THE SURFACE FINISH SHALL BE CROSS BROOMED.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI IN 28 DAYS.
- APPROVAL MUST BE OBTAINED FROM THE COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT FOR SIDEWALK AT ANY LOCATION IN THE PUBLIC ROAD R/W.
- PROVIDE MEDIUM BROOM FINISH, PRIOR TO APPLYING WHEELCHAIR RAMP TEXTURE.

CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	STANDARD SIDEWALK AND CURB RAMP RESIDENTIAL AREAS	S900
		1-1-99 N.T.S.



GENERAL NOTES:

- 8' sidewalk width with slope of 2% is required through driveways. 3' 6" min. width is acceptable where full sidewalk width is less than 8'.
- Width of driveway (W) and length of landing area shall be as shown on plans or as directed.
- Where existing driveway is in good condition, and meets slope requirements construct only as much as required for satisfactory connection with new work.
- Tooled joints are required at all driveway slope break lines.
- Any dimensions except those of Graded Note 1 may be overruled by local agencies for their use.

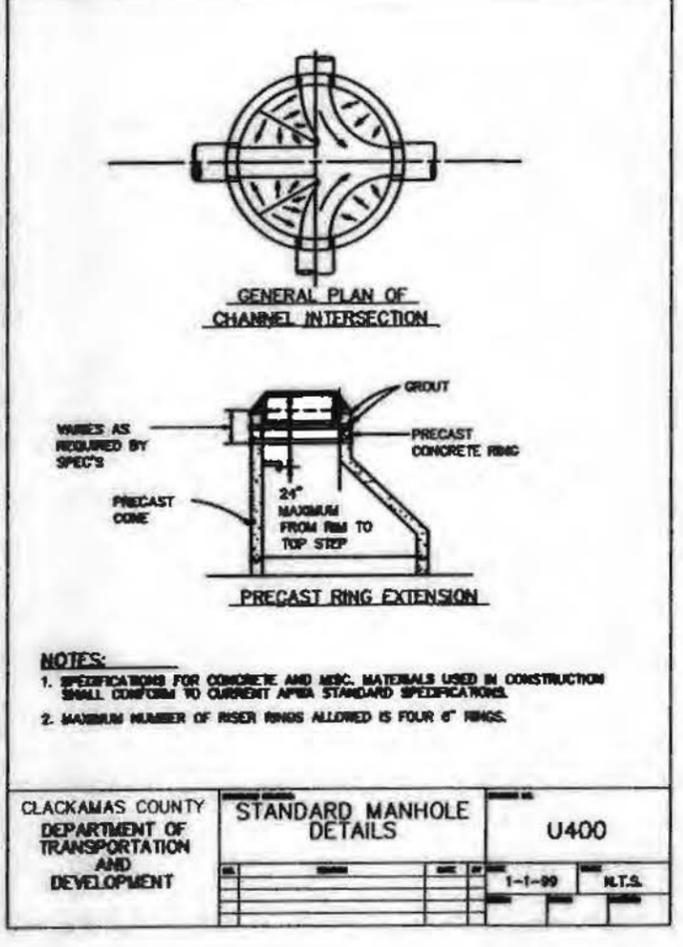
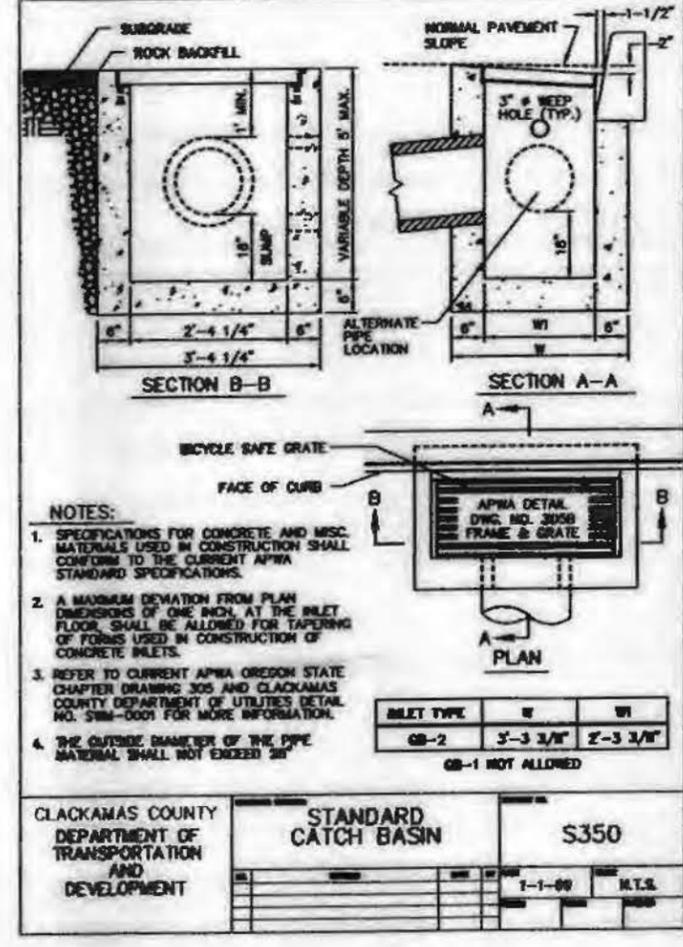
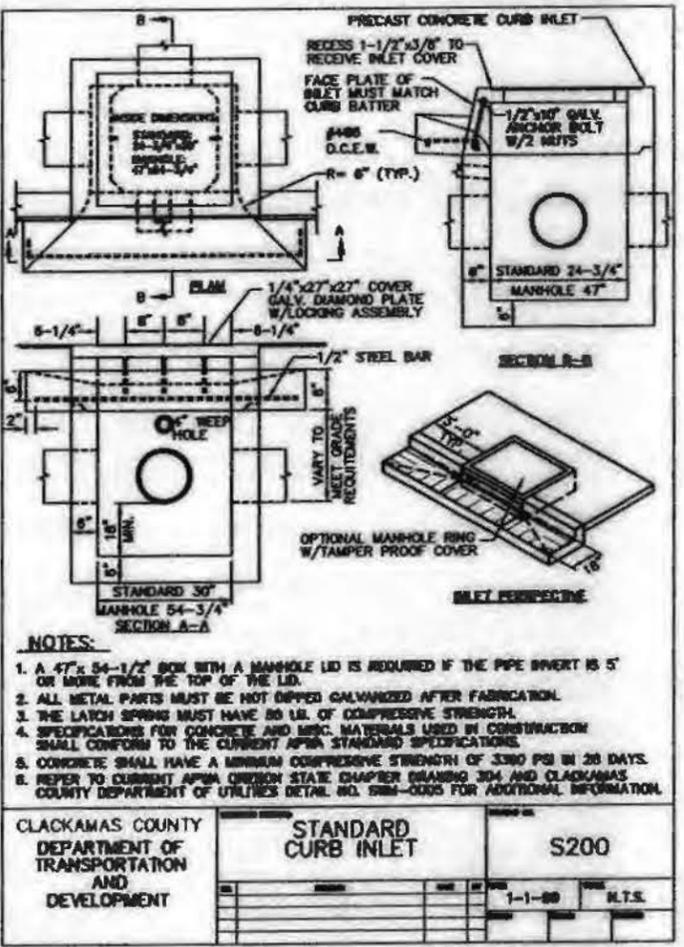
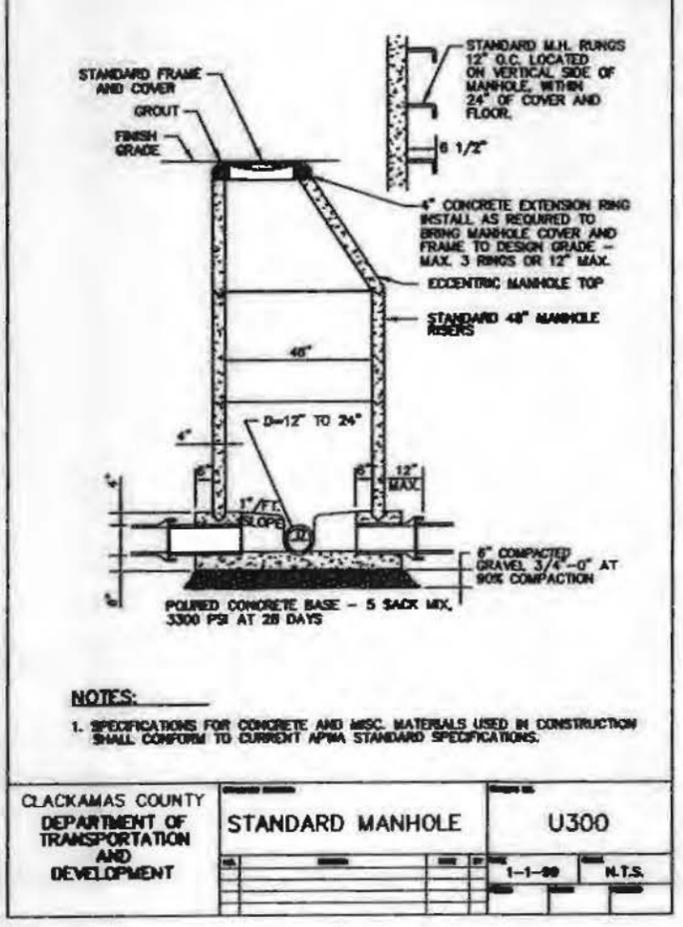
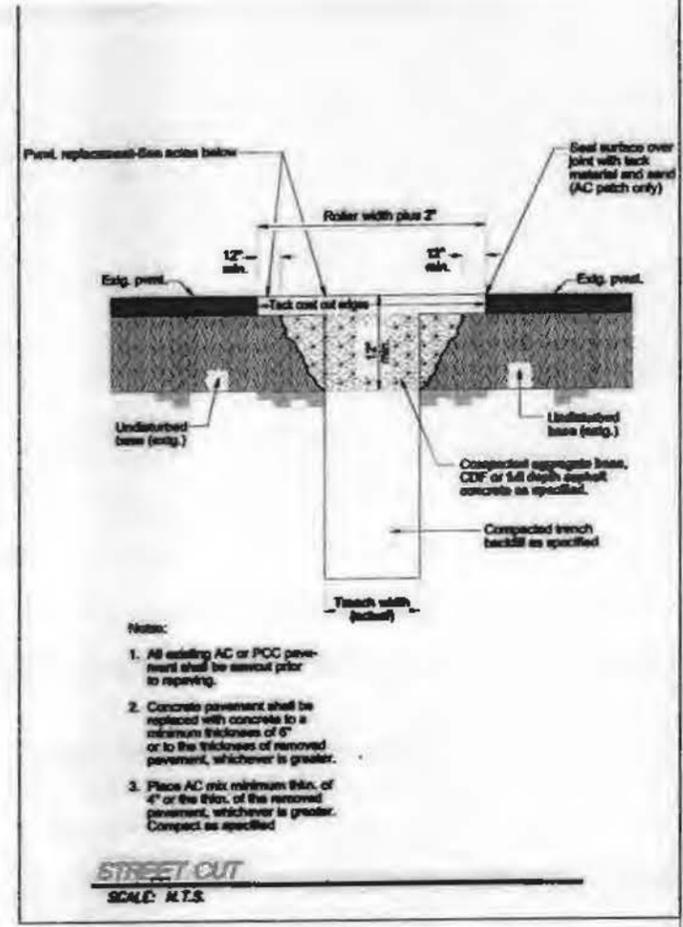
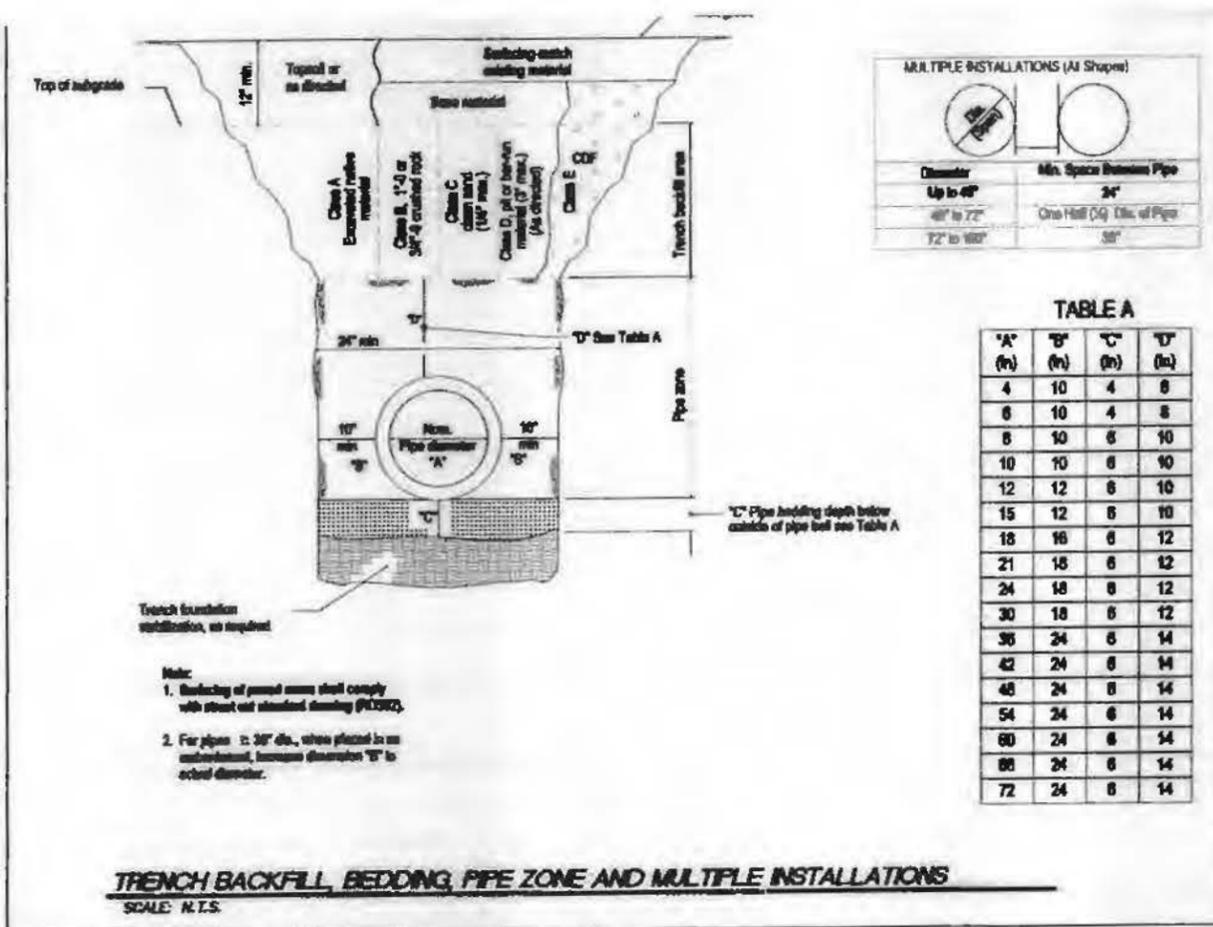
CONCRETE DRIVEWAY DROP
NOT TO SCALE

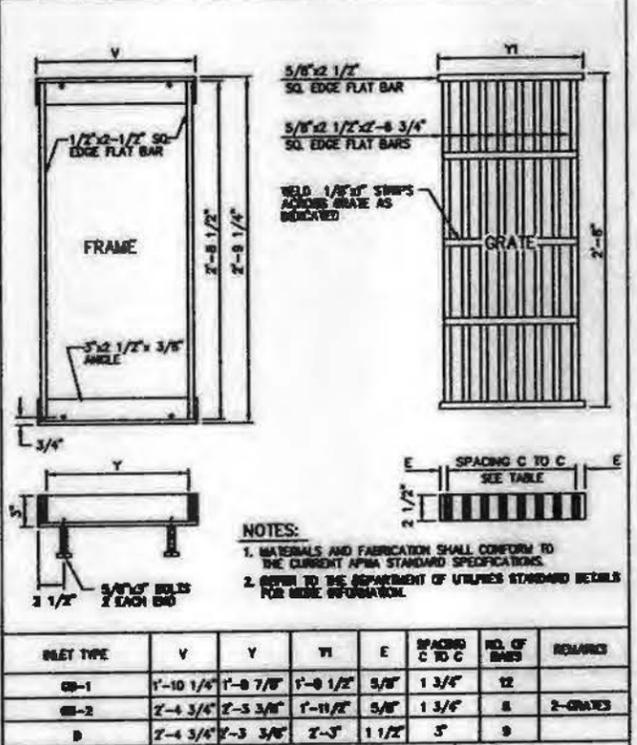
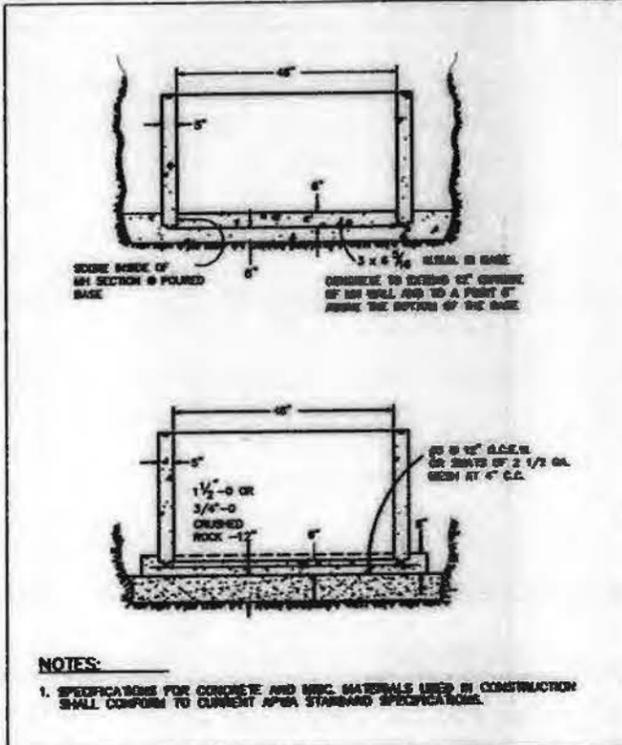
SUNNYSIDE VILLAGE GREEN
 STREET DETAILS
 WATER ENVIRONMENT SERVICES
 CLACKAMAS COUNTY, OREGON

REVISION COMMENTS
 DATE BY
 NO.

DESIGN DATE: 06/20/00
 DESIGN: JGN
 CHECKED: JGN
 DATE: July 24, 2003

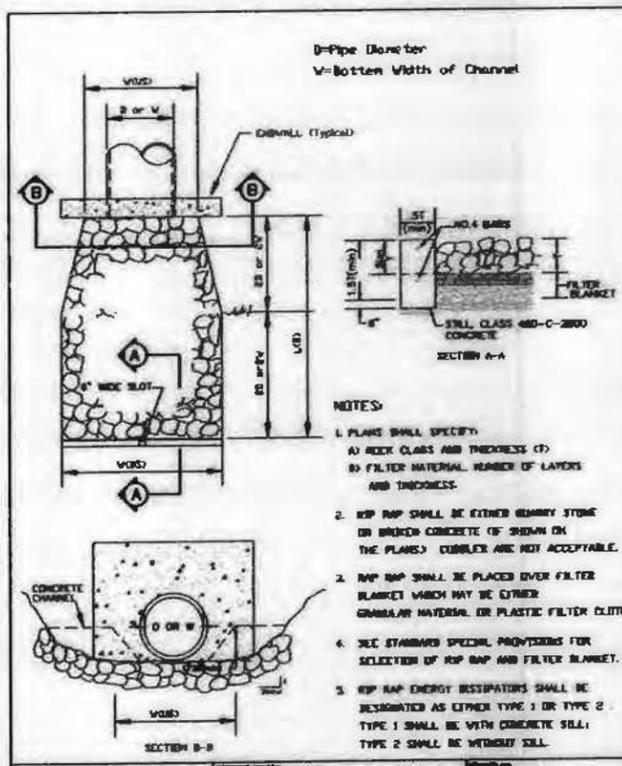
11236 CEO4
 Project No. Drawing No.
C12
 Sheet No.
 Copyright 2002 ©



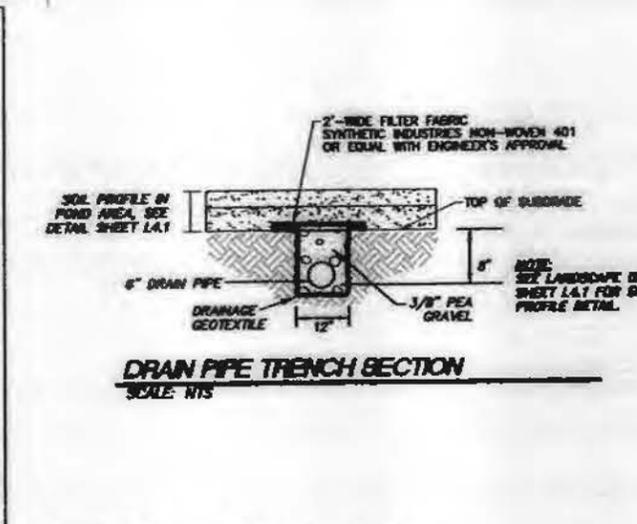


CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	PRECAST MANHOLE BASES	U500
		1-1-00 N.T.S.

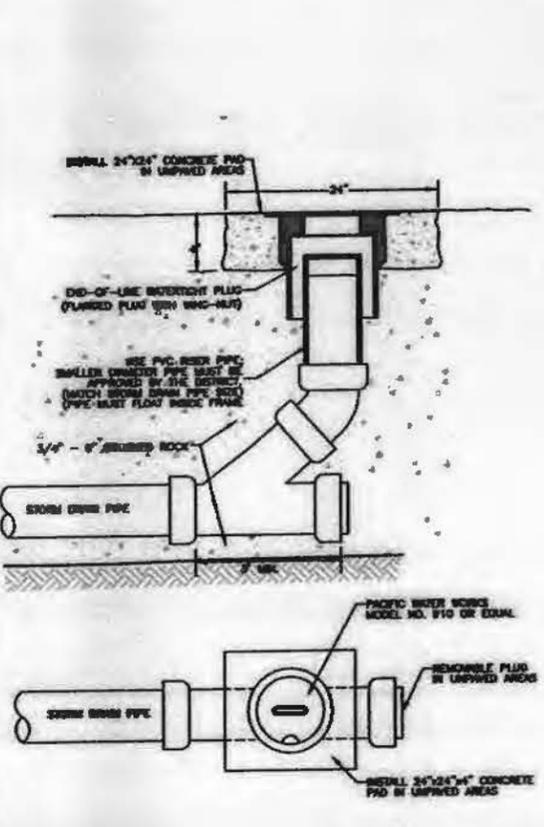
CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	STANDARD FRAME AND GRATE DETAILS	S400
		1-1-00 N.T.S.



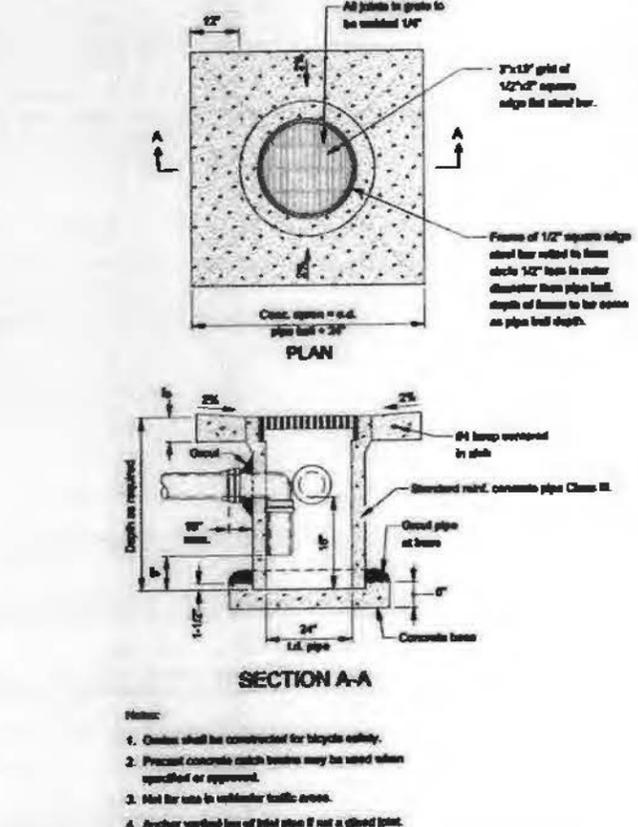
CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT	RIP RAP BASIN	U800
		1-1-00 N.T.S.



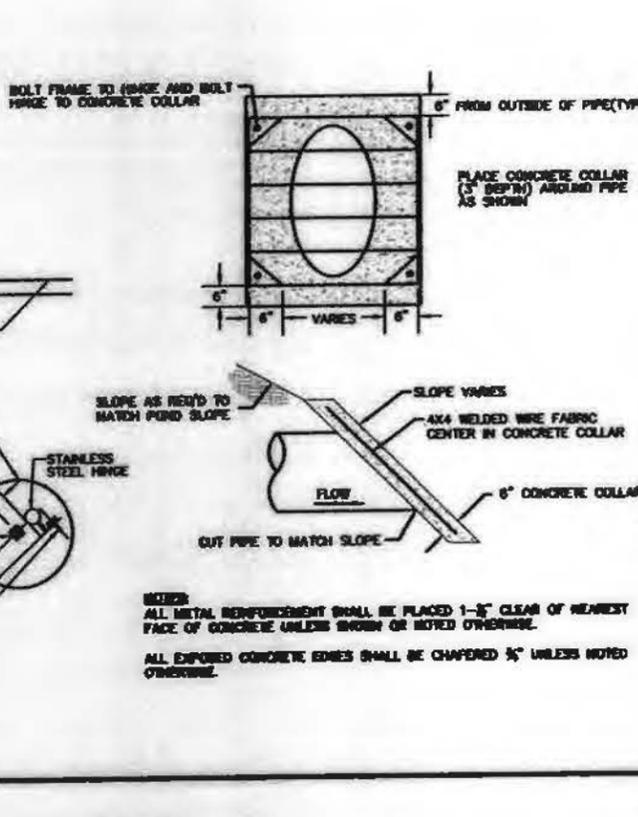
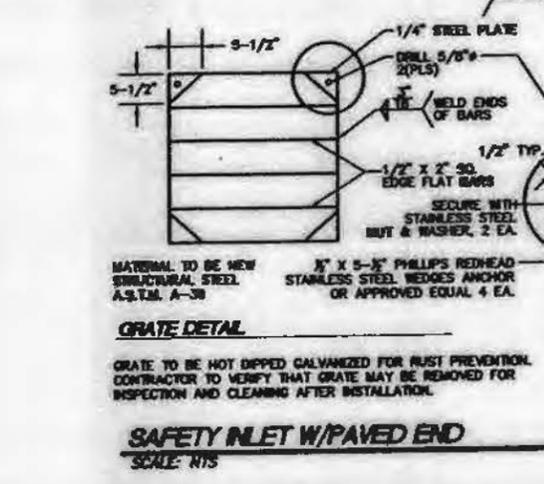
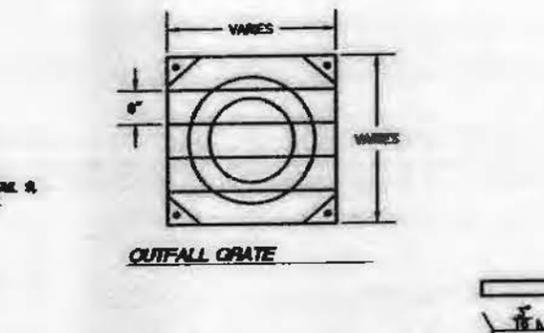
STRUCTURE	A	D	E	OFFSET
Basin Length L(B) - FT	28	28	10	10
Upstream Basin Width, W(U) - FT	10.5	10.5	3.0	3.0
Downstream Basin Width, W(D) - FT	22.0	22.0	7.0	7.0
Riprap Class (COOT)	250	250	100	100
Riprap Depth - INCH	22	22	15	15
Filter Material	4'-0"	4'-0"	NONE	NONE
Filter Material Depth - INCH	6"	6"	N/A	N/A



CLEANOUT
SCALE: N.T.S.



AREA DRAINAGE BASIN
SCALE: N.T.S.

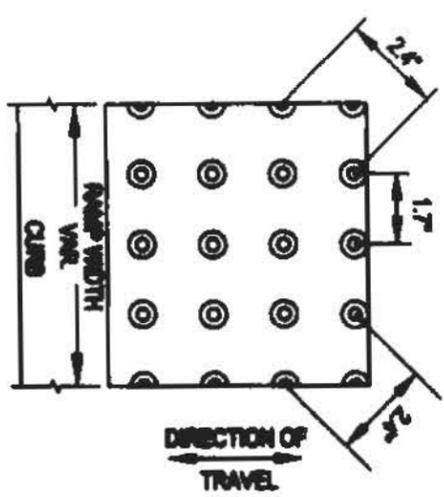
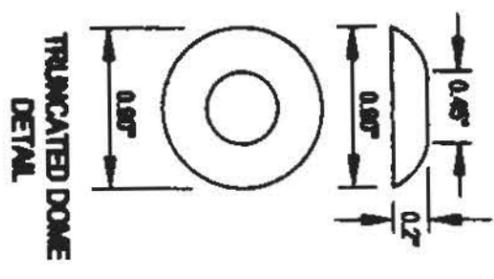
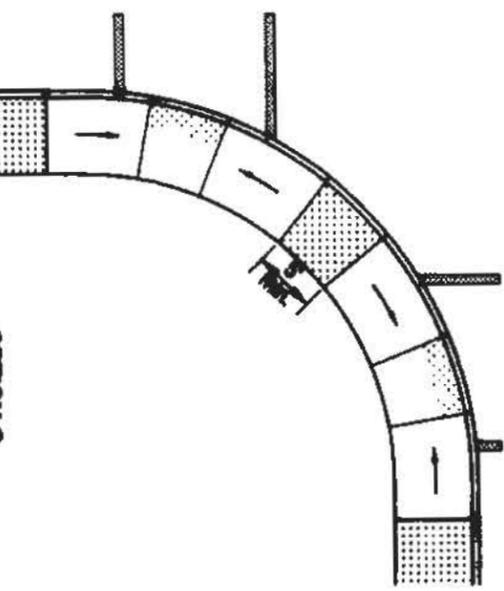
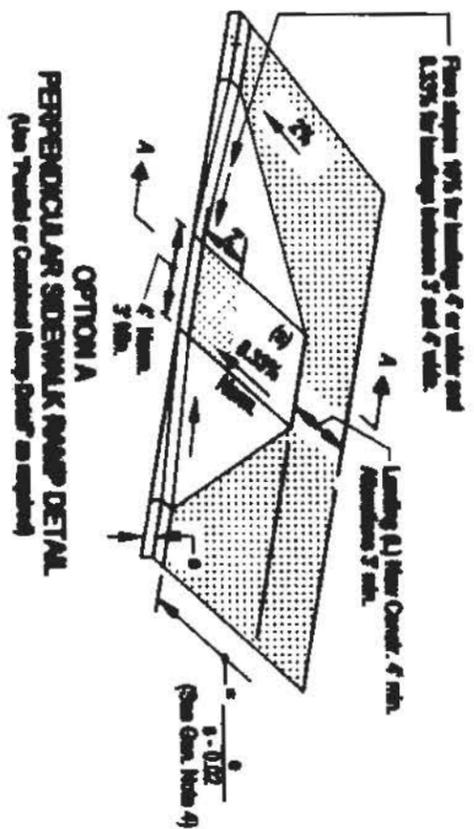


NO.	DATE	BY	REVISION COMMENTS



SUNNYSIDE VILLAGE GREEN
 STORM DRAIN DETAILS
 WATER ENVIRONMENT SERVICES
 CLACKAMAS COUNTY, OREGON

oak
 Incorporated
 105 W Evergreen Blvd. #300
 Vancouver, WA 98660-3123
 Phone: (360) 737-9813
 FAX: (360) 737-9851
 Internet: WWW.OAK.COM
 11236 CE04
 Project No. Drawing No.
C14
 Sheet No.
 Copyright 2002 © O



- GENERAL NOTES:**
1. Plans truncated dome elevations showing texture in the lower 30" of the height of the ramp only. Average elevations along the path only are shown in detail right. Color of texture to be widely pattern.
 2. Standards each ramp slopes shown are relative to the true level surface (zero bubble).
 3. Slope shown that are not part of the path of travel may be any slope.
 4. Do not slope landing more than 3% in any direction.
 5. Ramps for paths incorporating a roadway should be full width of path.
 6. Standards ramp details are based on GDS 407 210 and the proposed ADAAG Section 14, June 20, 1994.
 7. When 2 curb ramps are immediately adjacent as in Option A from PD770, the curb supports (a) between the adjacent side forms may slope between 3" and full design exposure.
 8. For the purposes of this drawing, a curb ramp is considered "perpendicular" if the angle between the longitudinal axis of the ramp and a tangent to the curb of the ramp center is 75° or greater.
 9. Standard landing points at all standards ramp slope break lines.

CLIMB RAMP
NTS

INCORPORATED
101 S. Thompson Blvd. 2004
Portland, OR 97204-4513
Phone: 503-251-4444
Fax: 503-251-4444
www.incorporated.com

11/23/04 CE04
Project No. Drawing No.
C17

SUNNYSIDE VILLAGE GREEN
SIDEWALK RAMP DETAILS
WATER ENVIRONMENT SERVICES
CLACKAMAS COUNTY, OREGON



NO.	DATE	BY	REVISION COMMENTS

Design	Drawn	Checked	Date	Initial	Issue Date
JGN	JGN				July 24, 2003

EXHIBIT B

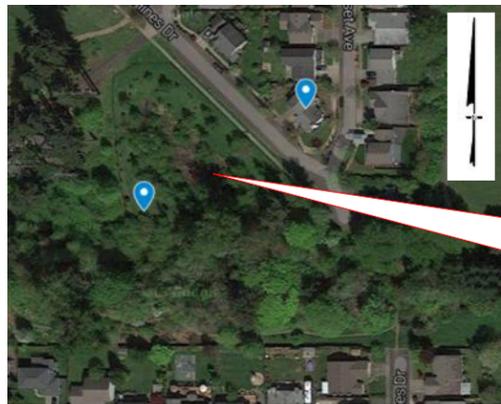
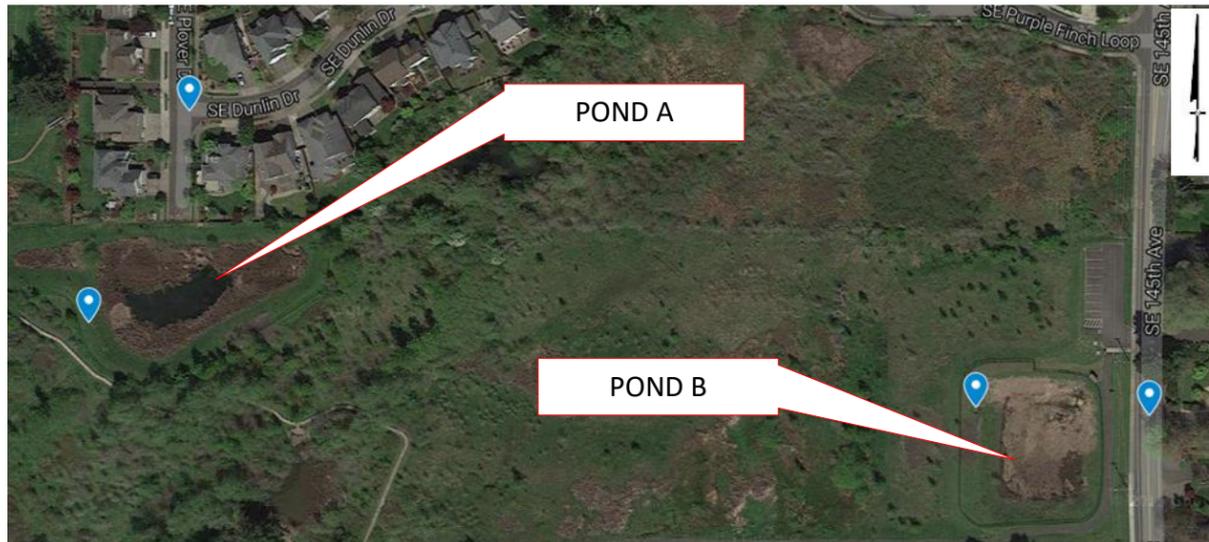
CLACKAMAS CMAC

SUNNY SIDE
 13960 SE Hines Dr, Clackamas, OR 97015
 45.4217, -122.51041

POND A
 9878 SE Plover Dr, Happy Valley, OR
 45.45135, -122.51878

POND B
 10079 SE 145th Ave Happy Valley, OR 97086
 45.45036, -122.51433

CONCEPTUAL DESIGN



NOTES:
 1. AERIAL IMAGERY OBTAINED FROM GOOGLE MAPS.

LIST OF DRAWINGS	
DRAWING NO.	DRAWING TITLE
1	TITLE SHEET
2	PROJECT NOTES
3	SUNNY SIDE - EXISTING CONDITIONS
4	SUNNY SIDE - PROPOSED CONDITIONS
5	SUNNY SIDE - PROPOSED OUTLET STRUCTURE
6	POND A - EXISTING CONDITIONS
7	POND A - PROPOSED CONDITIONS
8	POND A - PROPOSED OUTLET STRUCTURE
9	POND B - EXISTING CONDITIONS
10	POND B - PROPOSED CONDITIONS
11	POND B - PROPOSED OUTLET STRUCTURE
12	OUTLET STRUCTURE DETAILS
13	PROPOSED SUPPORT POLE
14	ELECTRICAL CONDUIT SCHEDULE
15	MATERIALS PROCURED BY OPTI

PREPARED FOR:

 Water Environment Services
 150 Beaver Creek Rd.
 Oregon City, OR 97045

PREPARED BY:

 OptiRTC, Inc.
 356 Boylston Street, 2nd Floor
 Boston, MA 02116



NOT TO SCALE NOT FOR CONSTRUCTION

EXHIBIT B

TITLE:	TITLE SHEET		
PROJECT:	CLACKAMAS CMAC		
SITE:	SUNNY SIDE, POND A, POND B		
	DESIGN BY: AMH	DATE:	9/22/2016
	DRAWN BY: AMH	PROJECT NO.:	OP349
	CHECKED BY:	FILE:	
	REVIEWED BY:	DRAWING NO.:	
	APPROVED BY:		<u>1</u> OF <u>15</u>

OptiRTC, Inc.
 356 Boylston Street, 2nd Floor
 Boston, MA 02116

GENERAL NOTES

1. THE INTENT OF THIS PROJECT IS TO RETROFIT THREE EXISTING PASSIVE STORMWATER MANAGEMENT FACILITIES WITH CONTINUOUS MONITORING AND ADAPTIVE CONTROL (CMAC) TO IMPROVE WATER QUALITY AND FLOOD CONTROL OF THE FACILITIES. THIS PRIMARILY CONSISTS OF INTALLING A WATER LEVEL SENSOR, ELECTRICALLY ACTUATED VALVE, AND A SUPPORT POLE THAT INCLUDES A CONTROL PANEL.
2. WORK PERFORMED PER THE PLANS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS, PERMITTING, AND OTHER RESTRICTIONS IN EFFECT FOR CONSTRUCTION ACTIVITIES WITHIN SITE LIMITS.
3. ALL PERSONS ENGAGED IN INSTALLATION OF THE SYSTEM SHALL BE FAMILIAR WITH, AND SHALL AT ALL TIMES CONFORM TO THE REGULATIONS OF THE "OSHA GENERAL INDUSTRY OCCUPATIONAL SAFETY AND HEALTH STANDARDS," "OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION," AND OTHER APPLICABLE STATE AND MUNICIPAL STANDARDS AND REGULATIONS.
4. UPON COMPLETION OF WORK, REMOVE ALL CONSTRUCTION MATERIALS AND TRASH AND CONDUCT OTHER REASONABLE CLEAN-UP ACTIVITIES.
5. FINAL COMPLETION SHALL BE REACHED WHEN: (1) CONSTRUCTION OF THE SYSTEM PER THE PLANS IS COMPLETE; (2) AN APPROVED AS-BUILT SKETCH OF ALL INSTALLED COMPONENTS; (3) ENGINEER HAS COMPLETED FINAL INSPECTION OF WORK AND ALL NOTED DEFICIENCIES HAVE BEEN CORRECTED TO THE SATISFACTION OF THE ENGINEER AND COUNTY.

SITE / EARTHWORK

1. DETERMINE IF THERE ARE UNDERGROUND UTILITIES IN THE WORK AREA PRIOR TO EXCAVATION, BY CALLING OREGON 811 AT LEAST 48 HOURS PRIOR TO STARTING WORK. CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO UNDERGROUND UTILITIES CAUSED BY TRENCHING OR EXCAVATION.
2. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY.
3. WHEN LAYING CONDUIT, OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY.
4. HOLES AND/OR TRENCHES SHALL NOT BE LEFT IN ANY LOCATIONS UNGUARDED. IF IT IS NECESSARY TO DO SO, PROVIDE SUITABLE PROTECTION AND WARNING SIGNS TO PREVENT INJURY.
5. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO LOCAL REQUIREMENTS.
6. ALL PVC JOINTS SHALL BE SOLVENT GLUED TO FORM A WATERTIGHT SEAL.
7. PROVIDE AN AS-BUILT SKETCH OF ALL CONDUITS AND INSTALLED COMPONENTS FOLLOWING CONSTRUCTION.
8. ALL HARDWARE SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED.

ELECTRICAL

1. INSTALLATION OF THE ELECTRICAL ENCLOSURE AND ASSOCIATED COMPONENTS (E.G., CABLING, CONDUIT, SENSORS) MUST BE PERFORMED BY A LICENSED ELECTRICIAN. IN PARTICULAR, ELECTRICIAN SHALL BE RESPONSIBLE FOR ENSURING THAT THE ELECTRICAL ENCLOSURE IS PROPERLY CONNECTED TO THE SOLAR POWER SYSTEM OR LINE POWER, EARTH GROUNDED, AND THAT CONDUIT AND CABLING IS SIZED AND INSTALLED PER THE NEC.
2. WHEN INSTALLING COMPONENTS ENSURE THAT ALL POWER IS OFF. ENGINEER OR ENGINEER'S REPRESENTATIVE WILL INSPECT INSTALLED COMPONENTS PRIOR TO ENERGIZING THE SYSTEM.
3. CONDUITS SHALL BE RIGID SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.
4. CONDUIT PENETRATIONS INTO ALL EQUIPMENT AND JUNCTION BOXES SHALL BE WATERTIGHT. TO ENSURE A WATERTIGHT SEAL, ALL CONDUIT PENETRATIONS (EXTERIOR AND INTERIOR) SHALL BE SEALED WITH A COMBINATION OF DRY OAKUM (MANUFACTURED BY DE NEEF CONSTRUCTION CHEMICALS) AND DUXSEAL (MANUFACTURED BY PARKER-HANNIFIN CORP) OR EQUAL APPROVED BY ENGINEER.
5. RIGID SCHEDULE 40 CONDUIT SHALL BE INSTALLED WITH A MINIMUM COVER OF AT LEAST 18" IN ACCORDANCE WITH TABLE 300.5 OF THE NEC.
6. PROVIDE UNDERGROUND CONDUIT RUNS WITH PROVISIONS FOR DRAINING MOISTURE. SLOPE HORIZONTAL CONDUIT RUNS TO DRAIN AT A RATE OF EACH LEAST 0.25 PERCENT.
7. ALL CONDUITS SHALL HAVE A MINIMUM NOMINAL DIAMETER OF 1" AND SHALL BE SIZED PER THE NEC TO HAVE AN ADEQUATE CROSS SECTIONAL AREA FOR INSTALLED CABLES (WHICHEVER IS MORE STRINGENT).
8. FOR BENDS IN CONDUIT RUNS, PROVIDE THE MINIMUM RADIUS NECESSARY, NOT EXCEEDING 360 DEGREES OF BEND PER RUN BETWEEN JUNCTION BOXES.
9. ALL CABLING SHALL BE SUITABLE FOR DIRECT BURIAL APPLICATIONS, HAVE A MINIMUM TEMPERATURE RATING OF 75 DEGREES C FOR USE IN WET LOCATIONS, HAVE A THWN JACKET FOR USE IN WET LOCATIONS, AND HAVE SOLID COPPER CONDUCTORS.
10. ALL CABLE SPLICES MUST BE MADE WITHIN JUNCTION BOXES AND SHALL BE LIQUID TIGHT AND SHALL BE SOLDERED AND COVERED WITH DUAL WALL HEAT SHRINK. WIRE NUTS SHALL NOT BE ALLOWED FOR ANY CONNECTIONS.
11. ALL JUNCTION BOXES (IF NEEDED) SHALL BE INSTALLED ABOVE GRADE AND INSTALLED SO NO WATER MAY PENETRATE ANY SEALS.
12. LEAVE MINIMUM OF 1 FOOT SPARE CABLING NEATLY COILED IN JUNCTION BOXES FOR FUTURE MAINTENANCE OR SYSTEM MODIFICATIONS.
13. ALL SENSOR CABLES SHALL BE LABELLED AT EACH END (AT THE SENSOR AND IN THE CONTROL PANEL) AND THE LABELS REDLINED IN THE SITE LAYOUT MAP.



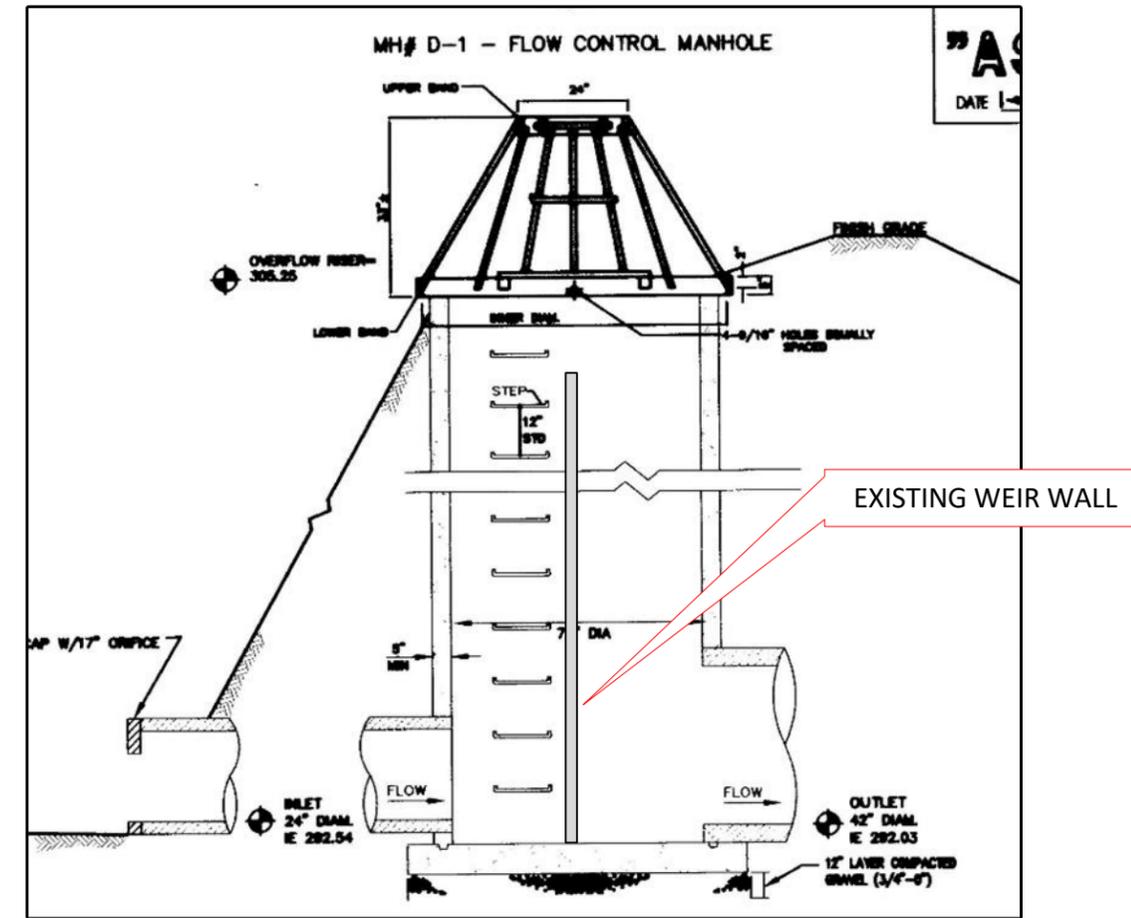
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PROJECT:				CLACKAMAS CMAC			
SITE:				SUNNY SIDE, POND A, POND B			
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116		DESIGN BY:	AMH	DATE:	9/22/2016		
		DRAWN BY:	AMH	PROJECT NO.:	OP349		
		CHECKED BY:		FILE:			
		REVIEWED BY:		DRAWING NO.:			
APPROVED BY:				2 OF 15			

NOT TO SCALE NOT FOR CONSTRUCTION

SUNNY SIDE SITE AERIAL



OUTLET STRUCTURE



NOT TO SCALE

PICTURE OF WEIR WALL



EXISTING WEIR WALL

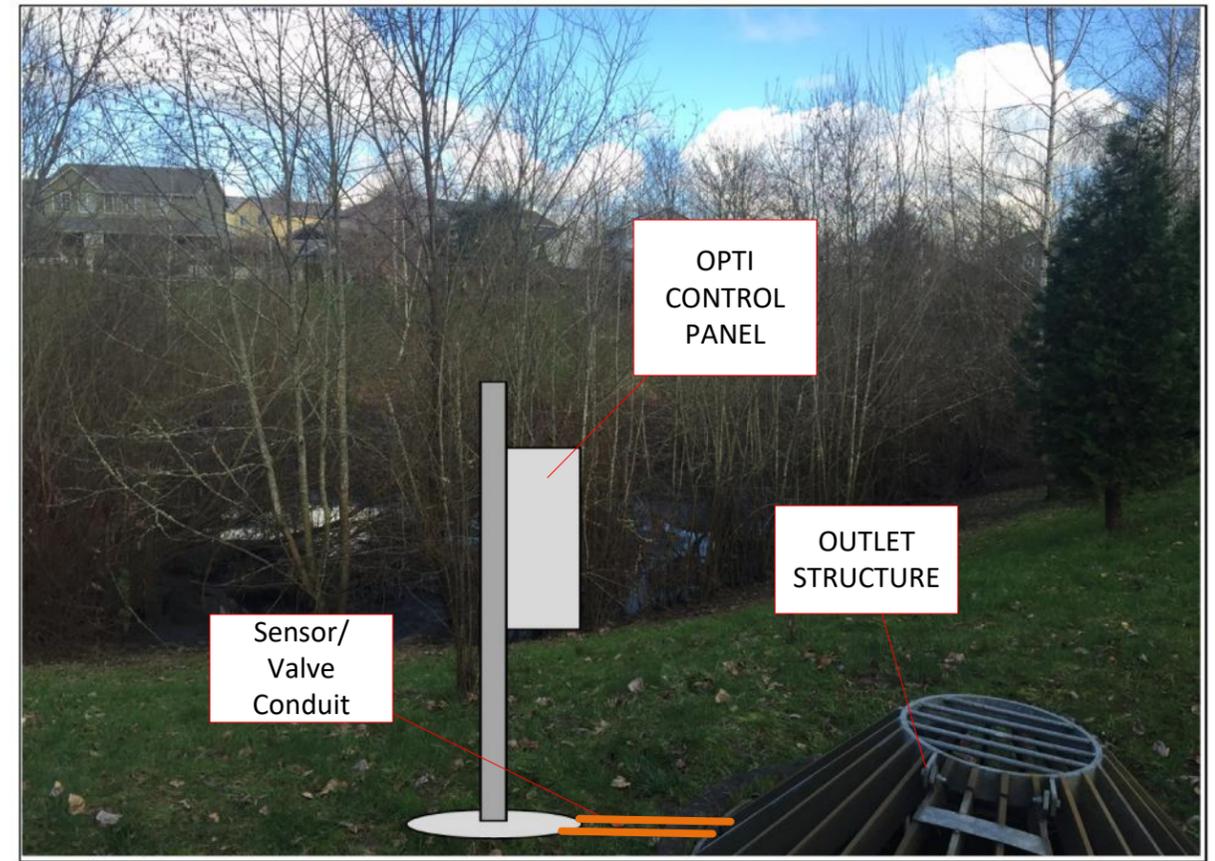
TITLE:		SUNNY SIDE - EXISTING CONDITIONS	
PROJECT:		CLACKAMAS CMAC	
SITE:		SUNNY SIDE, POND A, POND B	
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	DESIGN BY:	AMH	DATE: 9/22/2016
	DRAWN BY:	AMH	PROJECT NO.: OP349
	CHECKED BY:		FILE:
	REVIEWED BY:		DRAWING NO.:
	APPROVED BY:		3 OF 15

NOT TO SCALE NOT FOR CONSTRUCTION

AERIAL VISUAL OF PROPOSED SITE LAYOUT



ONSITE VISUAL OF PROPOSED CONTROL PANEL INSTALL



SCOPE OF WORK

CONTRACTOR WILL INSTALL AN APPROVED METER PEDESTAL ACCORDING TO PORTLAND GENERAL ELECTRIC (PGE) REGULATIONS. PGE WILL PROVIDE METER AND POWER DROP TO THE METER WITHIN 60FT OF THE RIGHT OF WAY.

CONTRACTOR WILL INSTALL CONDUIT FROM METER TO OPTI CONTROL PANEL TO PROVIDE 120V, 20AMP SERVICE TO CONTROL PANEL. CONDUIT WILL BE RUN ALONG THE FENCE OR TRENCHED ACCORDING TO INSTALLATION METHOD ACCEPTABLE BY LOCAL ELECTRICAL CODE. CONTRACTOR WILL INSTALL A POLE CONCRETED IN PLACE NEXT TO THE EXISTING OUTLET STRUCTURE, AND MOUNT THE OPTI CONTROL PANEL TO THE POLE.

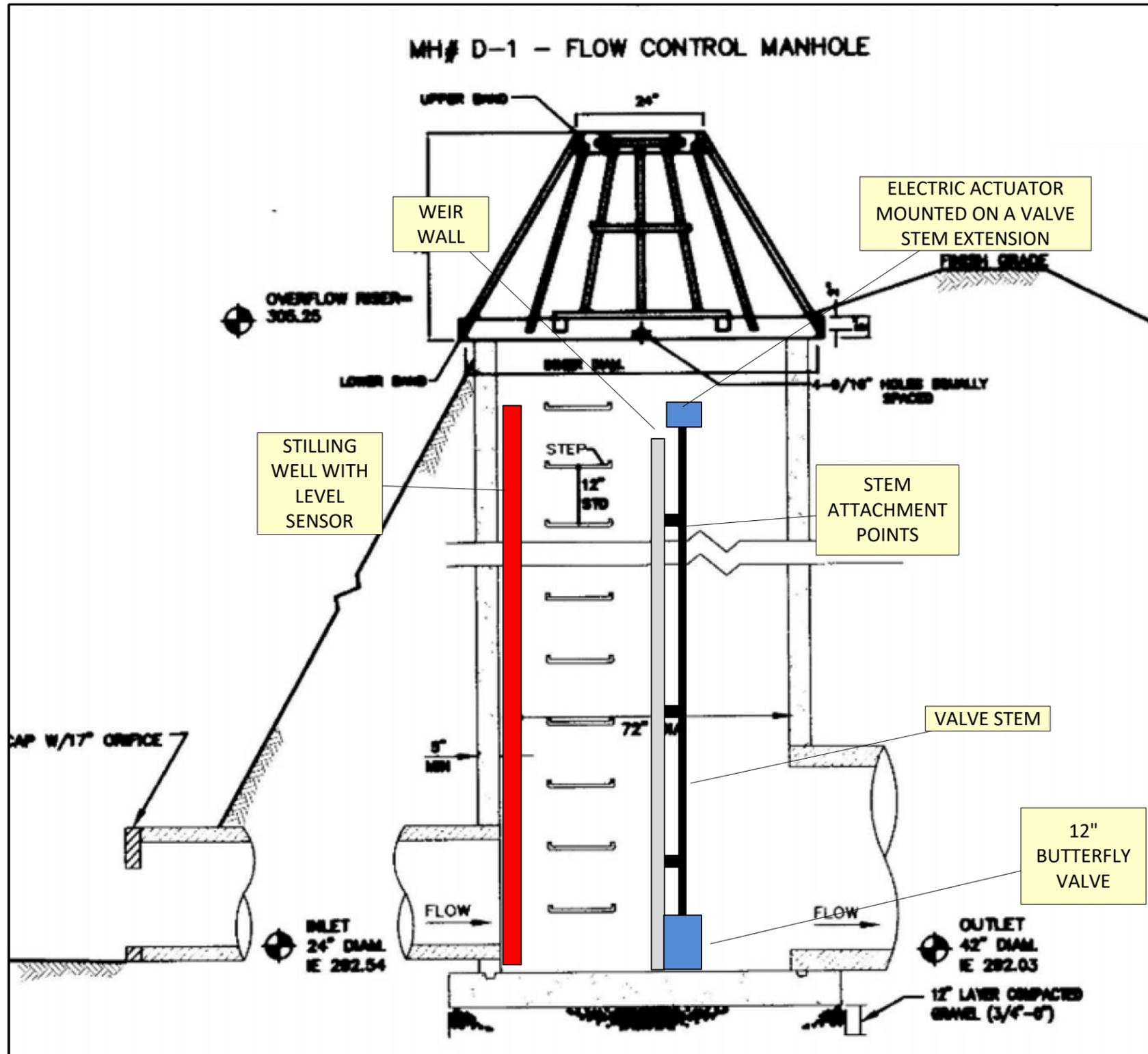
CONTRACTOR WILL REMOVE THE TOP PANEL OF THE EXISITING WEIR WALL AND INSTALL THE 12" BUTTERFLY VALVE AT IN THE BOTTOM PANEL OF THE WEIR WALL AND SECURE THE ACTUATOR STEM TO THE WEIR WALL. CONTRACTOR WILL MOUNT A PRESSURE TRANSDUCER IN A STILLING WELL INSIDE THE OUTLET STRUCTURE TO MEASURE WATER LEVEL.

CONTRACTOR WILL INSTALL TWO CONDUITIS FROM CONTROL PANEL TO THE OUTLET STRUCTURE FOR SIGNAL WIRE AND POWER. CONTRACTOR SHALL WIRE AND MAKE ALL ELECTRICAL CONNECTIONS AS SPECIFIED IN PLANS.

CONTRACTOR WILL INSTALL TRASH RACK AT INLET PIPE TO THE OUTLET STRUCTURE TO PREVENT DEBRIS FROM REACHING THE VALVE.

TITLE: SUNNY SIDE -PROPOSED CONDITIONS			
PROJECT: CLACKAMAS CMAC			
SITE: SUNNY SIDE, POND A, POND B			
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	 WATER ENVIRONMENT SERVICES	DESIGN BY: AMH	DATE: 9/22/2016
		DRAWN BY: AMH	PROJECT NO.: OP349
		CHECKED BY:	FILE:
		REVIEWED BY:	DRAWING NO.:
		APPROVED BY:	4 OF 15

PROPOSED OUTLET STRUCTURE



NOTES

CONTRACTOR WILL REMOVE THE TOP PANEL OF THE EXISTING WEIR WALL.

CONTRACTOR WILL INSTALL TRASHRACK ON INLET TO OUTLET STRUCTURE.

CONTRACTOR WILL INSTALL THE 12" BUTTERFLY VALVE WITH 10FT EXTENDED STEM AT IN THE BOTTOM PANEL OF THE WEIR WALL AND SECURE THE ACTUATOR STEM TO THE WEIR WALL. THE BUTTERFLY VALVE WILL BE INSTALLED OVER EXISTING ORIFICE OR THE ORIFICE SHALL BE COVERED. EXISTING MANUAL SLIDEGATE VALVE WILL BE LEFT INTACT AND OPERATIONAL.

CONTRACTOR WILL MOUNT A PRESSURE TRANSDUCER IN A STILLING WELL INSIDE THE OUTLET STRUCTURE TO MEASURE WATER LEVEL.

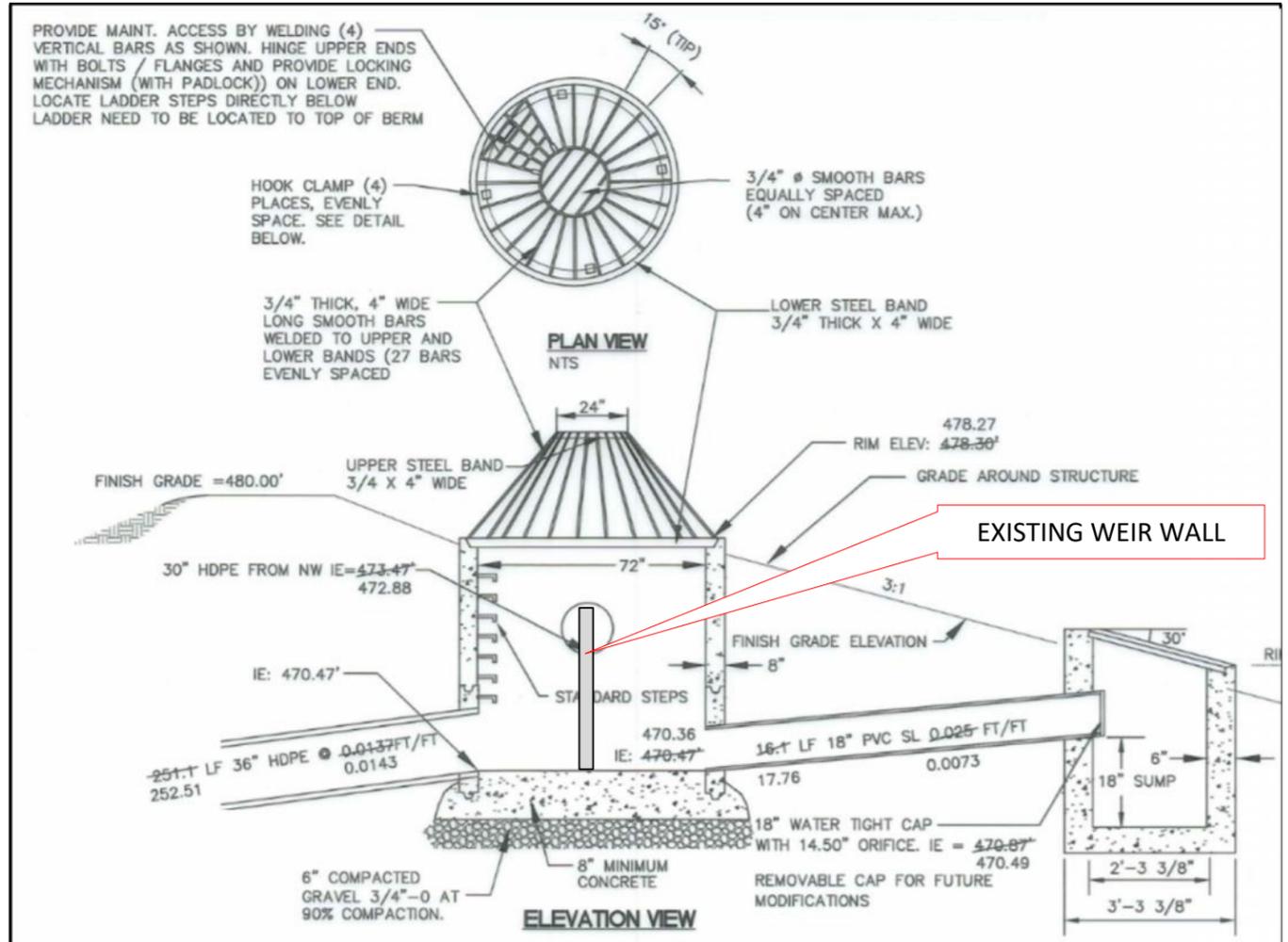
CONTRACTOR SHALL INSTALL COMPOUND AT EDGE AND SEEMS OF WEIRWALL TO ENSURE IT IS WATERTIGHT.

TITLE: SUNNY SIDE - PROPOSED OUTLET STRUCTURE				
PROJECT: CLACKAMAS CMAC				
SITE: SUNNY SIDE, POND A, POND B				
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	DESIGN BY:	AMH	DATE:	9/22/2016
	DRAWN BY:	AMH	PROJECT NO.:	OP349
	CHECKED BY:		FILE:	
	REVIEWED BY:		DRAWING NO.:	
	APPROVED BY:			5 OF 15

POND A SITE AERIAL



OUTLET STRUCTURE



NOT TO SCALE

EXISTING OUTLET STRUCTURE

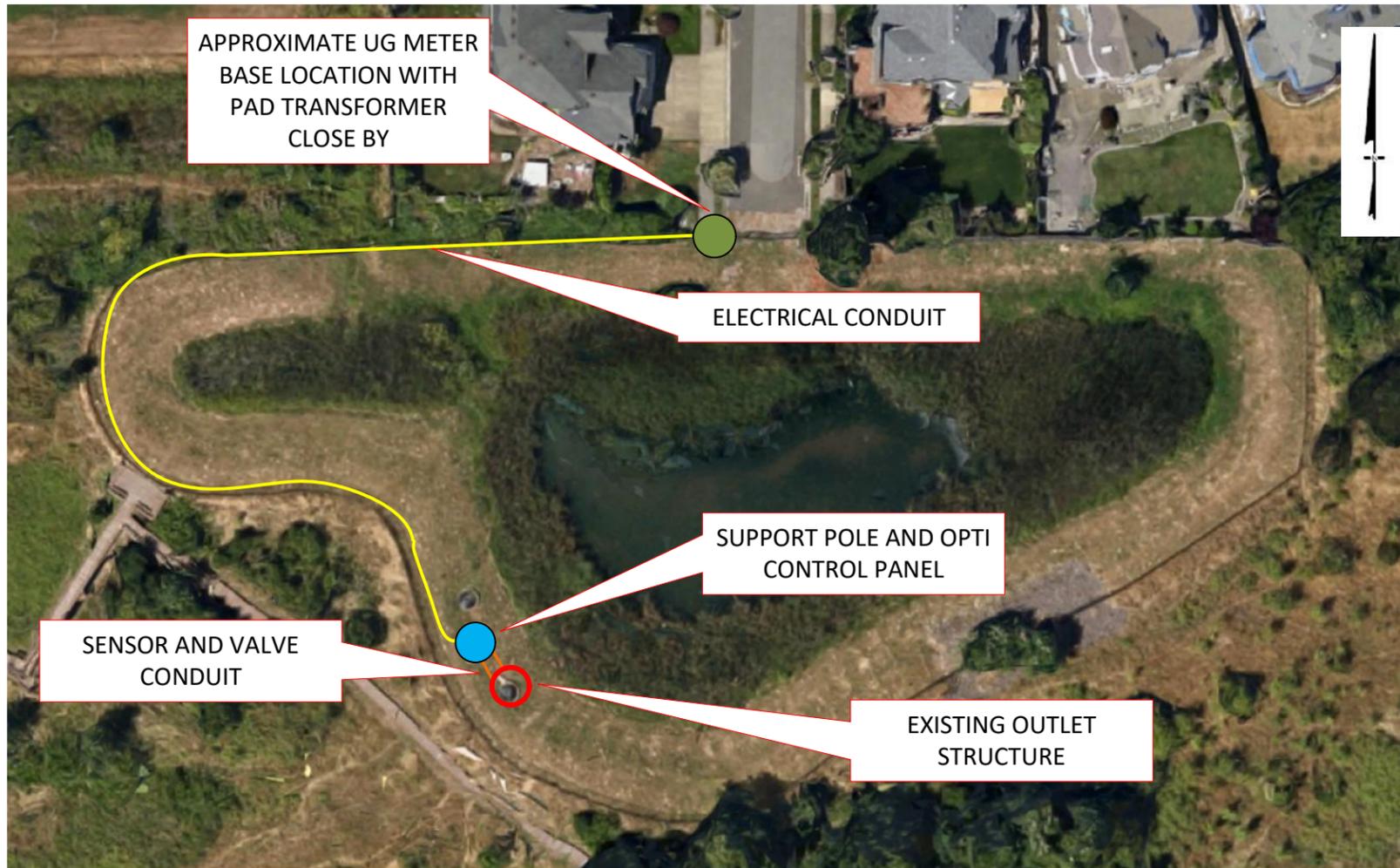


EXISTING WEIR WALL

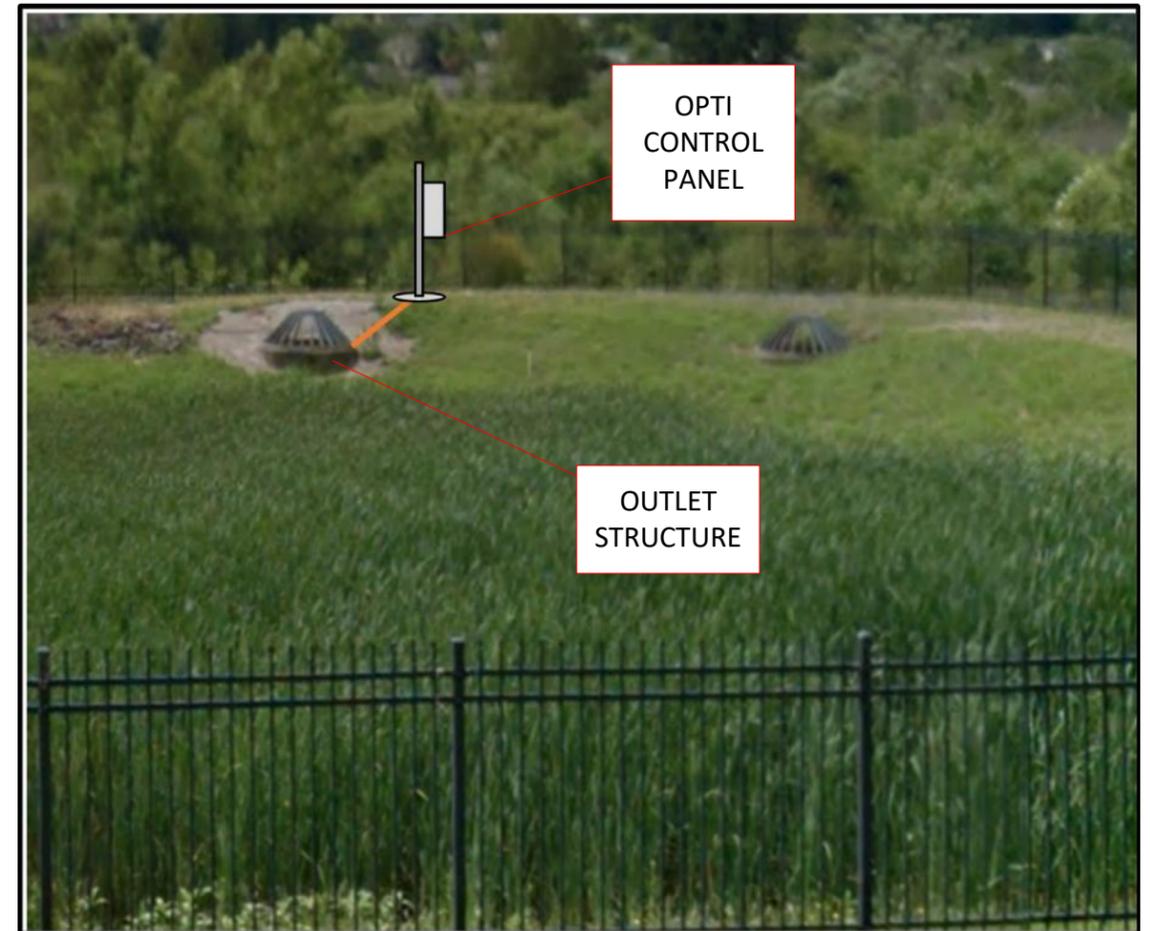
NOT TO SCALE NOT FOR CONSTRUCTION

TITLE:	POND A - EXISTING CONDITIONS			
PROJECT:	CLACKAMAS CMAC			
SITE:	SUNNY SIDE, POND A, POND B			
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	DESIGN BY:	AMH	DATE:	9/22/2016
	DRAWN BY:	AMH	PROJECT NO.:	OP349
	CHECKED BY:		FILE:	
	REVIEWED BY:		DRAWING NO.:	6 OF 15
	APPROVED BY:			

AERIAL VISUAL OF PROPOSED SITE LAYOUT



ONSITE VISUAL OF PROPOSED CONTROL PANEL INSTALL



SCOPE OF WORK

CONTRACTOR WILL INSTALL AN APPROVED METER PEDESTAL ACCORDING TO PORTLAND GENERAL ELECTRIC (PGE) REGULATIONS. PGE WILL PROVIDE A METER AND POWER DROP TO THE METER WITHIN 60FT OF THE RIGHT OF WAY.

CONTRACTOR WILL INSTALL CONDUIT FROM METER TO OPTI CONTROL PANEL TO PROVIDE 120V, 20AMP SERVICE TO CONTROL PANEL. CONDUIT WILL BE RUN ALONG THE FENCE OR TRENCHED ACCORDING TO INSTALLATION METHOD ACCEPTABLE BY LOCAL ELECTRICAL CODE.

CONTRACTOR WILL INSTALL A POLE CONCRETED IN PLACE NEXT TO THE EXISTING OUTLET STRUCTURE, AND MOUNT THE OPTI CONTROL PANEL TO THE POLE.

CONTRACTOR WILL REMOVE THE TOP PANEL OF THE EXISTING WEIR WALL AND INSTALL THE 12" BUTTERFLY VALVE AT IN THE BOTTOM PANEL OF THE WEIR WALL AND SECURE THE ACTUATOR STEM TO THE WEIR WALL. A PRESSURE TRANSDUCER SHALL BE MOUNTED IN A STILLING WELL INSIDE THE OUTLET STRUCTURE TO MEASURE WATER LEVEL.

CONTRACTOR WILL INSTALL TWO CONDUITS FROM CONTROL PANEL TO THE OUTLET STRUCTURE FOR SIGNAL WIRE AND POWER. CONTRACTOR SHALL WIRE MAKE ALL ELECTRICAL CONNECTIONS AS SPECIFIED IN PLANS.

CONTRACTOR WILL INSTALL TRASH RACK AT INLET PIPE TO THE OUTLET STRUCTURE TO PREVENT DEBRIS FROM REACHING THE VALVE.

TITLE: POND A - PROPOSED CONDITIONS			
PROJECT: CLACKAMAS CMAC			
SITE: SUNNY SIDE, POND A, POND B			
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116		DESIGN BY: AMH	DATE: 9/22/2016
		DRAWN BY: AMH	PROJECT NO.: OP349
		CHECKED BY:	FILE:
		REVIEWED BY:	DRAWING NO.:
APPROVED BY:		7 OF 15	

POND A SITE AERIAL



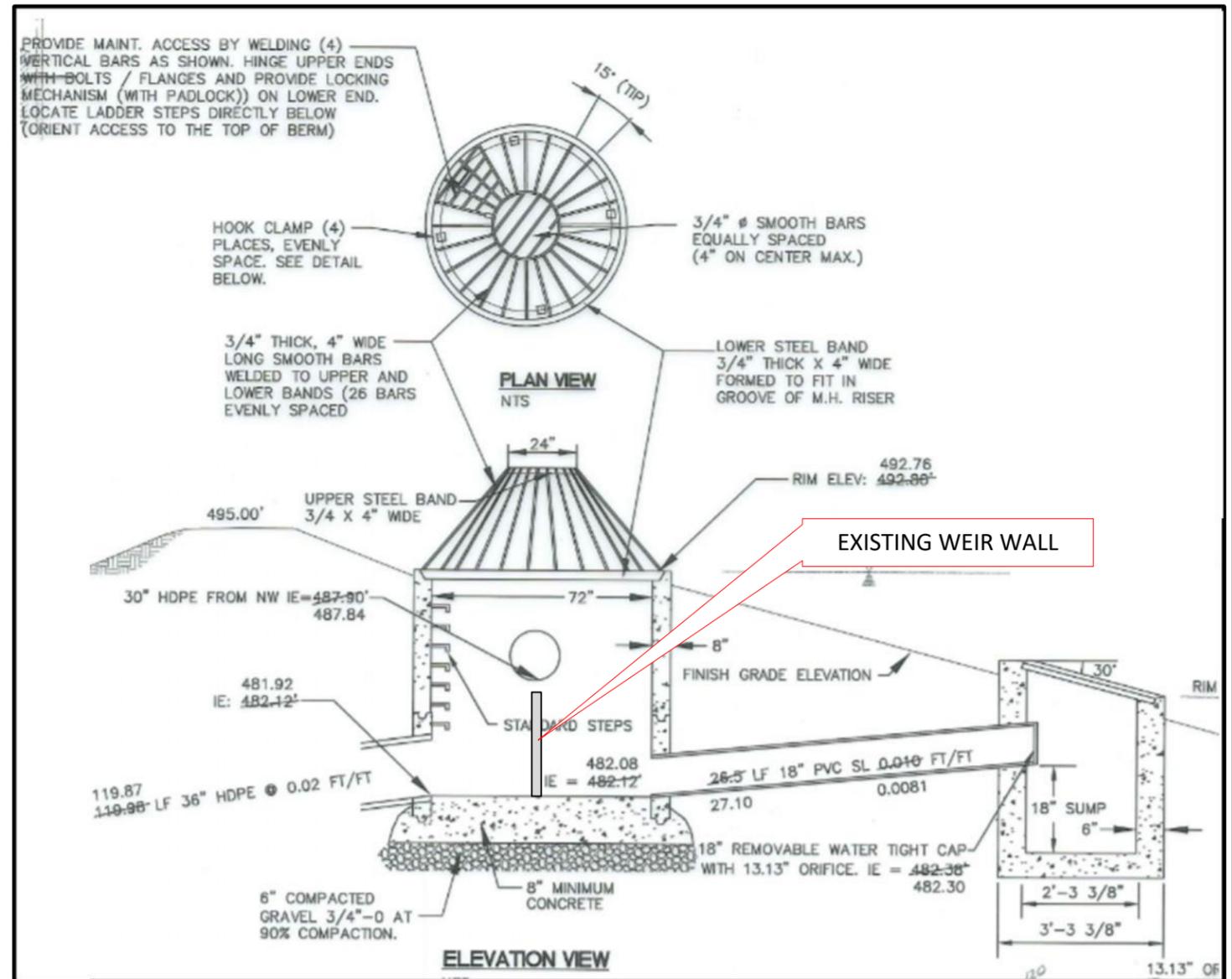
EXISTING OUTLET STRUCTURE

EXISTING OUTLET STRUCTURE



EXISTING WEIR WALL

OUTLET STRUCTURE



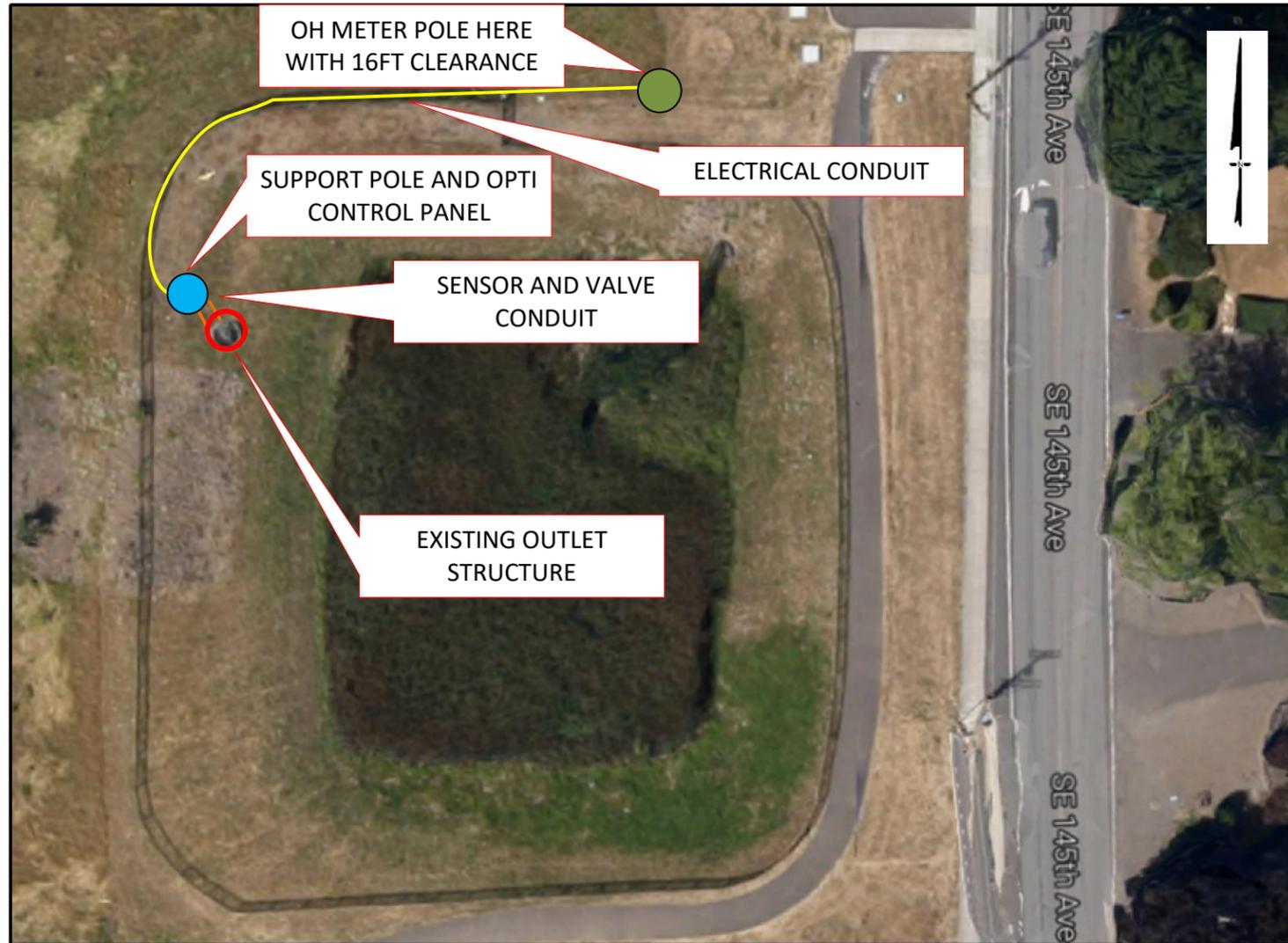
EXISTING WEIR WALL

NOT TO SCALE

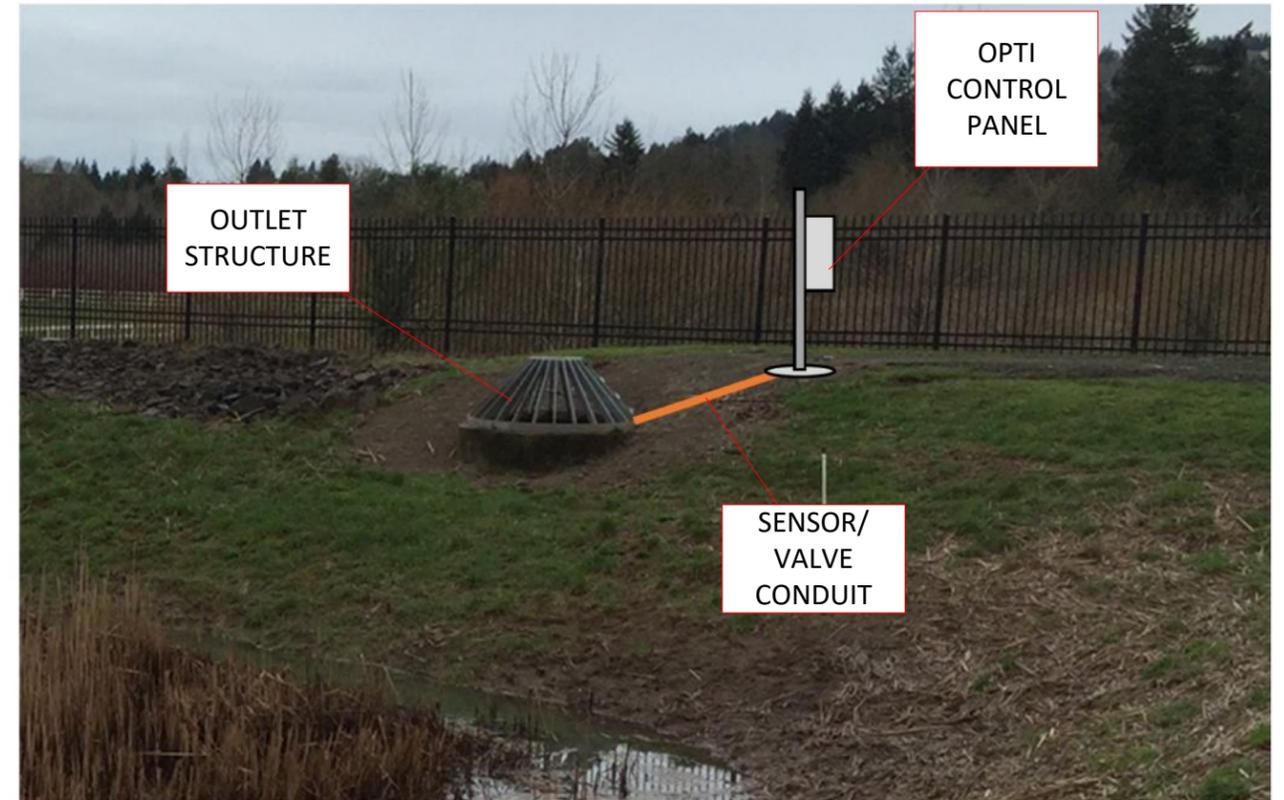
NOT TO SCALE NOT FOR CONSTRUCTION

TITLE:	POND B - EXISTING CONDITIONS		
PROJECT:	CLACKAMAS CMAC		
SITE:	SUNNY SIDE, POND A, POND B		
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	DESIGN BY:	AMH	DATE: 9/22/2016
	DRAWN BY:	AMH	PROJECT NO.: OP349
	CHECKED BY:		FILE:
	REVIEWED BY:		DRAWING NO.:
	APPROVED BY:		9 OF 15

AERIAL VISUAL OF PROPOSED SITE LAYOUT



ONSITE VISUAL OF PROPOSED CONTROL PANEL INSTALL



SCOPE OF WORK

CONTRACTOR WILL INSTALL AN APPROVED METER PEDESTAL ACCORDING TO PORTLAND GENERAL ELECTRIC (PGE) REGULATIONS. PGE WILL PROVIDE A METER AND POWER DROP TO THE METER WITHIN 60FT OF THE RIGHT OF WAY.

CONTRACTOR WILL INSTALL CONDUIT FROM METER TO OPTI CONTROL PANEL TO PROVIDE 120V, 20AMP SERVICE TO CONTROL PANEL. CONDUIT WILL BE RUN ALONG THE FENCE OR TRENCHED ACCORDING TO INSTALLATION METHOD ACCEPTABLE BY LOCAL ELECTRICAL CODE.

CONTRACTOR WILL INSTALL A POLE CONCRETED IN PLACE NEXT TO THE EXISTING OUTLET STRUCTURE, AND MOUNT THE OPTI CONTROL PANEL TO THE POLE.

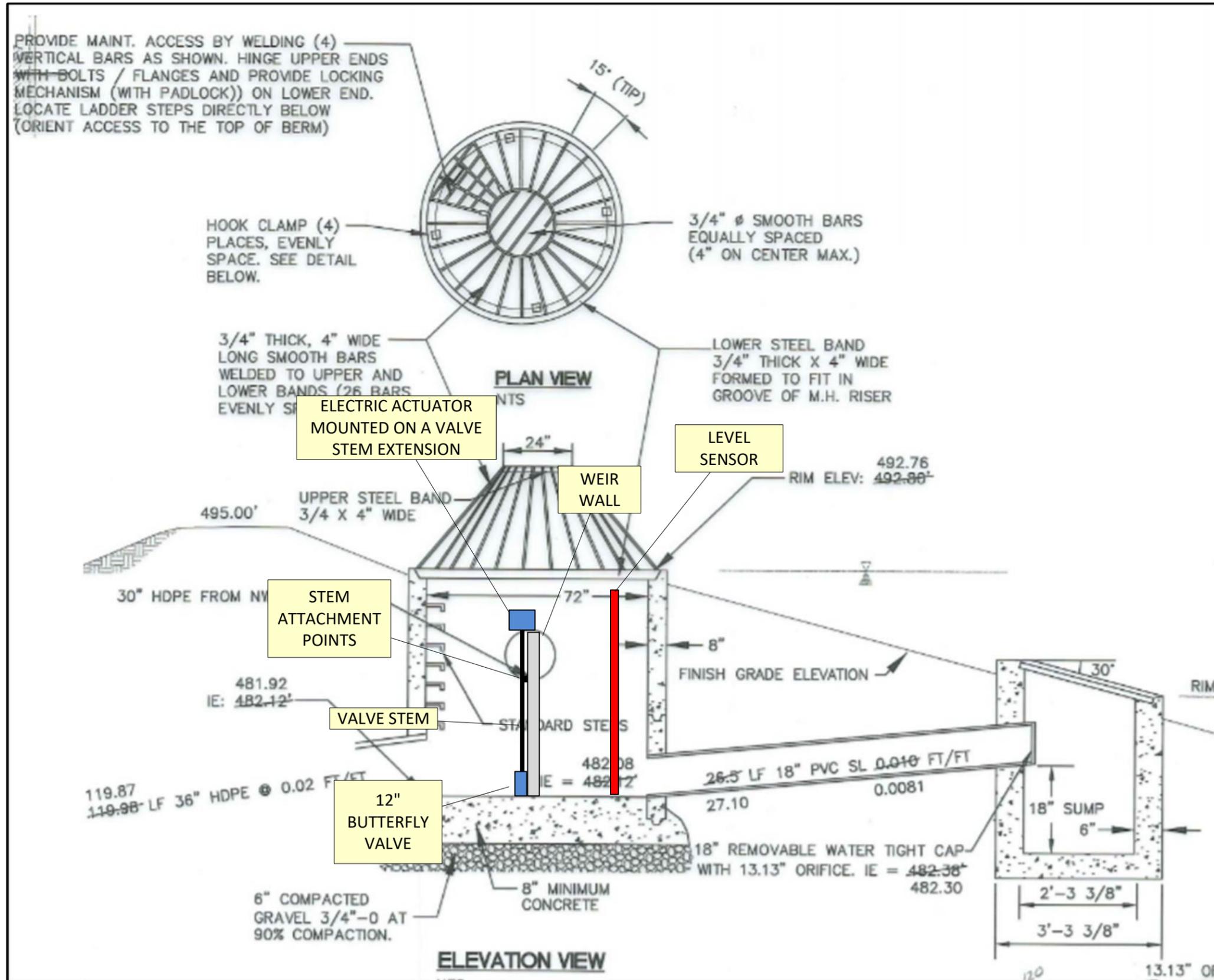
CONTRACTOR WILL REMOVE ENTIRE WEIR WALL, REMOVE THE TOP PANEL OF THE EXISITING WEIR WALL AND INSTALL THE 12" BUTTERFLY VALVE AT IN THE BOTTOM PANEL OF THE WEIR WALL AND SECURE THE ACTUATOR STEM TO THE WEIR WALL. WEIR WALL WILL BE REINSTALLED IN OUTLET STRUCTURE AT A NEW ORIENTATION SUCH THAT THE INLETS AND OUTLETS ARE SEPERATED BY THE WEIR WALL. A PRESSURE TRANSDUCER SHALL BE MOUNTED IN A STILLING WELL INSIDE THE OUTLET STRUCTURE TO MEASURE WATER LEVEL.

CONTRACTOR WILL INSTALL TWO CONDUITIS FROM CONTROL PANEL TO THE OUTLET STRUCTURE FOR SIGNAL WIRE AND POWER. CONTRACTOR SHALL WIRE MAKE ALL ELECTRICAL CONNECTIONS AS SPECIFIED IN PLANS.

CONTRACTOR WILL INSTALL TRASH RACK AT INLET PIPE TO THE OUTLET STRUCTURE TO PREVENT DEBRIS FROM REACHING THE VALVE.

TITLE:	POND B - PORPOSED CONDITIONS				
PROJECT:	CLACKAMAS CMAC				
SITE:	SUNNY SIDE, POND A, POND B				
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	 WATER ENVIRONMENT SERVICES	DESIGN BY:	AMH	DATE:	9/22/2016
		DRAWN BY:	AMH	PROJECT NO.:	OP349
		CHECKED BY:		FILE:	
		REVIEWED BY:		DRAWING NO.:	
APPROVED BY:				10 OF 15	

PROPOSED OUTLET STRUCTURE



NOTES

CONTRACTOR WILL REMOVE THE TOP PANEL OF THE EXISTING WEIR WALL.

CONTRACTOR WILL INSTALL TRASHRACK ON INLET TO OUTLET STRUCTURE.

CONTRACTOR WILL INSTALL THE 12" BUTTERFLY VALVE WITH 8 FT EXTENDED STEM AT IN THE BOTTOM PANEL OF THE WEIR WALL AND SECURE THE ACTUATOR STEM TO THE WEIR WALL. THE BUTTERFLY VALVE WILL BE INSTALLED OVER EXISTING ORIFICE OR THE ORIFICE SHALL BE COVERED. EXISTING MANUAL SLIDEGATE VALVE WILL BE LEFT INTACT AND OPERATIONAL.

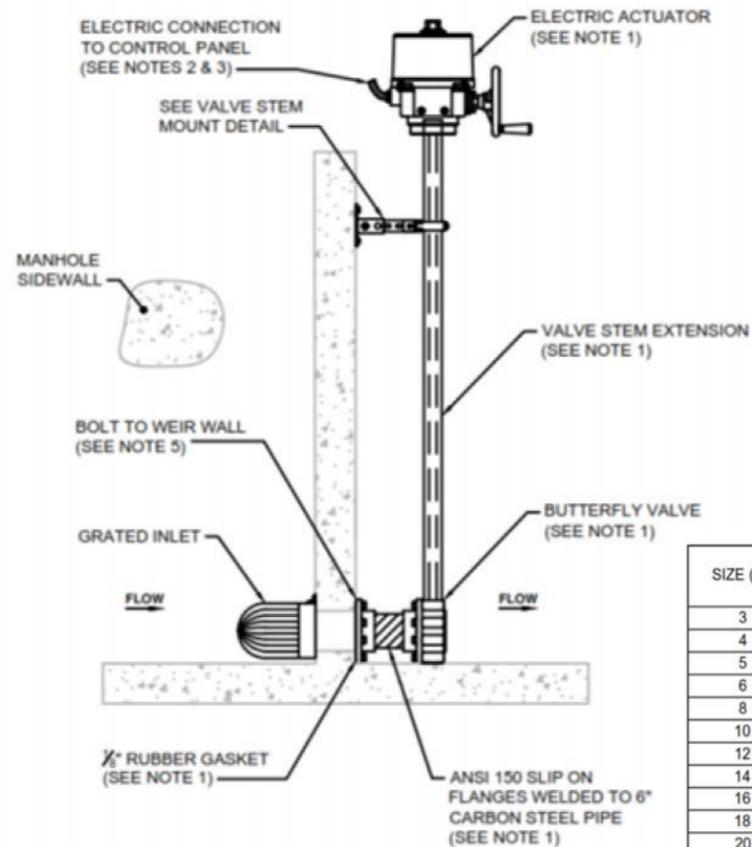
CONTRACTOR WILL MOUNT A PRESSURE TRANSDUCER IN A STILLING WELL INSIDE THE OUTLET STRUCTURE TO MEASURE WATER LEVEL.

CONTRACTOR SHALL INSTALL COMPOUND AT EDGE AND SEAMS OF WEIRWALL TO ENSURE IT IS WATERTIGHT.

TITLE:	POND B - PROPOSED OUTLET STRUCTURE		
PROJECT:	CLACKAMAS CMAC		
SITE:	SUNNY SIDE, POND A, POND B		
DESIGN BY:	AMH	DATE:	9/22/2016
DRAWN BY:	AMH	PROJECT NO.:	OP349
CHECKED BY:		FILE:	
REVIEWED BY:		DRAWING NO.:	11 OF 15
APPROVED BY:			



GENERIC DETAIL – BUTTERFLY VALVE



SIZE (IN)	BOLT CIRCLE (IN)	# HOLES x TAPPED SIZE - SAE THREAD	ISO FLANGE TYPE
3	6	4 x 5/8 - 11 UNC	F05
4	7.5	8 x 5/8 - 11 UNC	F07
5	8.5	8 x 3/4 - 10 UNC	F07
6	9.5	8 x 3/4 - 10 UNC	F07
8	11.75	8 x 3/4 - 10 UNC	F10
10	14.25	12 x 7/8 - 9 UNC	F10
12	17	12 x 7/8 - 9 UNC	F10
14	18.75	12 x 1 - 8 UNC	F10
16	21.25	16 x 1 - 8 UNC	F14
18	22.75	16 x 1 1/8 - 7 UNC	F14
20	25	20 x 1 1/8 - 7 UNC	F16
24	29.5	20 x 1 1/4 - 7 UNC	F16

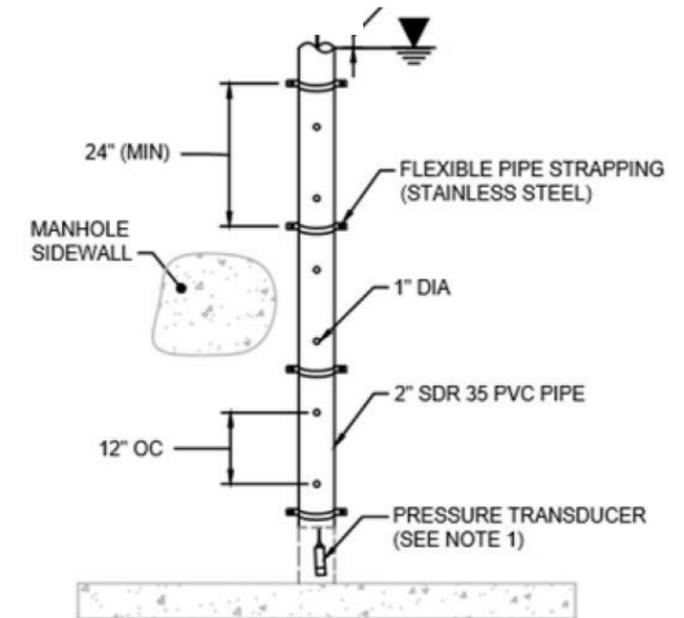
NOTES:

1. ACTUATED BUTTERFLY VALVE, STEM EXTENSION, FLANGED PIPE AND RUBBER GASKET AVAILABLE THROUGH PARTNERING VALVE DISTRIBUTOR AND FABRICATION SHOP. VALVE SHOULD REST ON OUTER STRUCTURE FLOOR OR BE SUPPORTED BY POURED CONCRETE PAD.
2. ALL HARDWARE TO BE #304 SS. SECURE CONDUIT TO SIDEWALL OF CONTROL STRUCTURE WITH #304 SS CLIPS (3' SPACING MAXIMUM).
3. CONDUIT BETWEEN JUNCTION BOX AND ACTUATOR IN WATER CONTROL STRUCTURE SHALL BE FLEXIBLE 3/4" THREADED SCHEDULE 40 PVC TO ACCOMMODATE ACTUATOR HOUSING.
4. FOLLOW MANUFACTURERS SPECIFICATIONS BUTTERFLY TO FLANGE CONNECTION (SEE TABLE FOR BOLT SIZES). INSTALLATION INSTRUCTIONS AND TORQUE STRENGTH AVAILABLE THROUGH OPTIRTC (PRATT-BF-SERIES-IOM PAGES 6-8).
5. ATTACH FLANGE TO WEIR WALL WITH THROUGH BOLTS.

NOTE:
STANDARD DETAILS APPLIES TO ALL THREE FACILITIES

NOT TO SCALE NOT FOR CONSTRUCTION

GENERIC DETAIL – PRESSURE TRANSDUCER LEVEL SENSOR

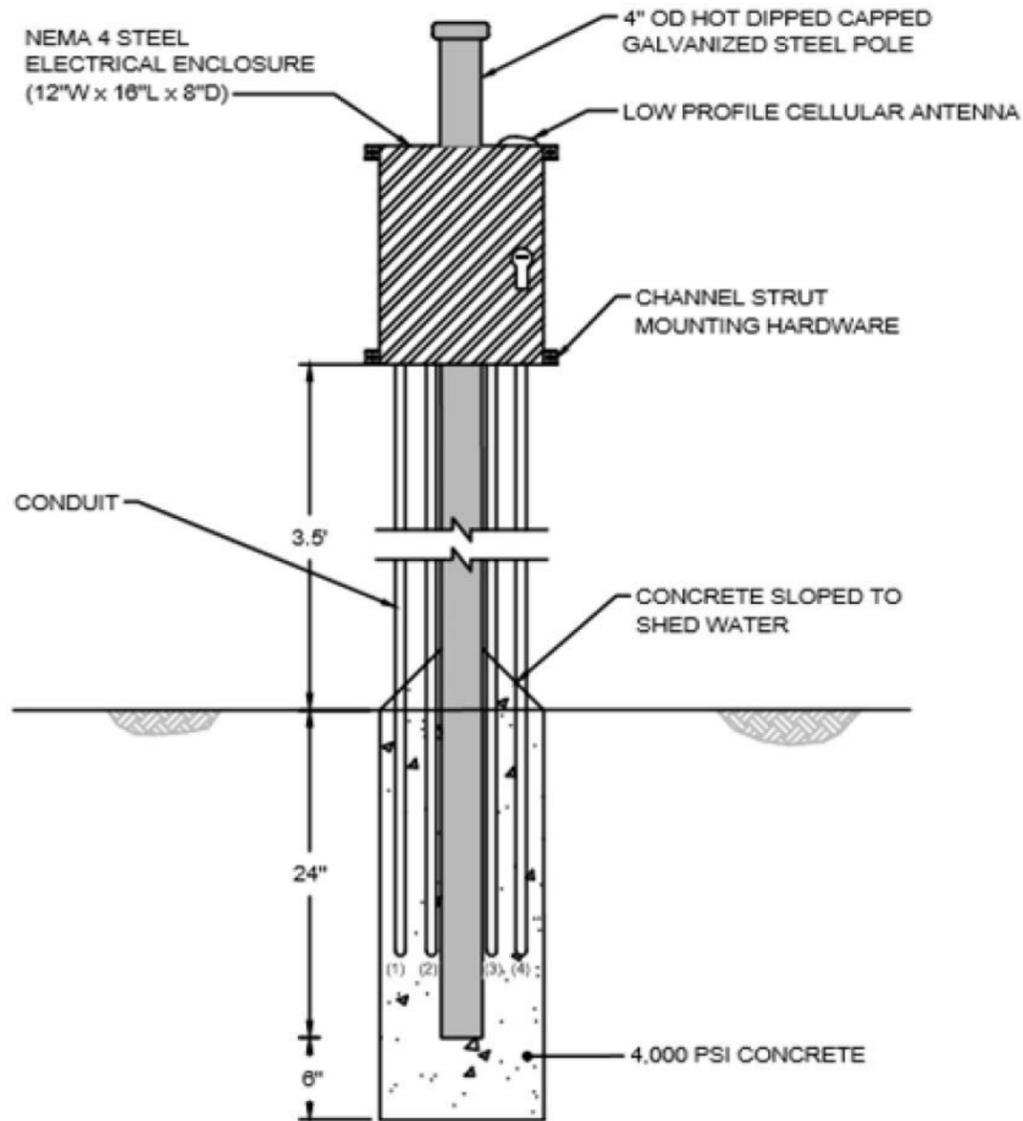


NOTES:

1. PRESSURE TRANSDUCER INSTALLED WITHIN STILLING WELL WITH SENSOR AT TANK BOTTOM.
2. PENETRATIONS INTO ALL EQUIPMENT AND CONNECTIONS WITHIN JUNCTION BOXES MUST BE LIQUID TIGHT. INSTALLATION OF ELECTRICAL COMPONENTS MUST BE IN ACCORDANCE TO OPTIRTC SPECIFICATIONS.

TITLE: OUTLET STRUCTURE DETAILS			
PROJECT: CLACKAMAS CMAC			
SITE: SUNNY SIDE, POND A, POND B			
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	 WATER ENVIRONMENT SERVICES	DESIGN BY: AMH	DATE: 9/22/2016
		DRAWN BY: AMH	PROJECT NO.: OP349
		CHECKED BY:	FILE:
		REVIEWED BY:	DRAWING NO.:
APPROVED BY:		12 OF 15	

GENERIC DETAIL – SUPPORT POLE



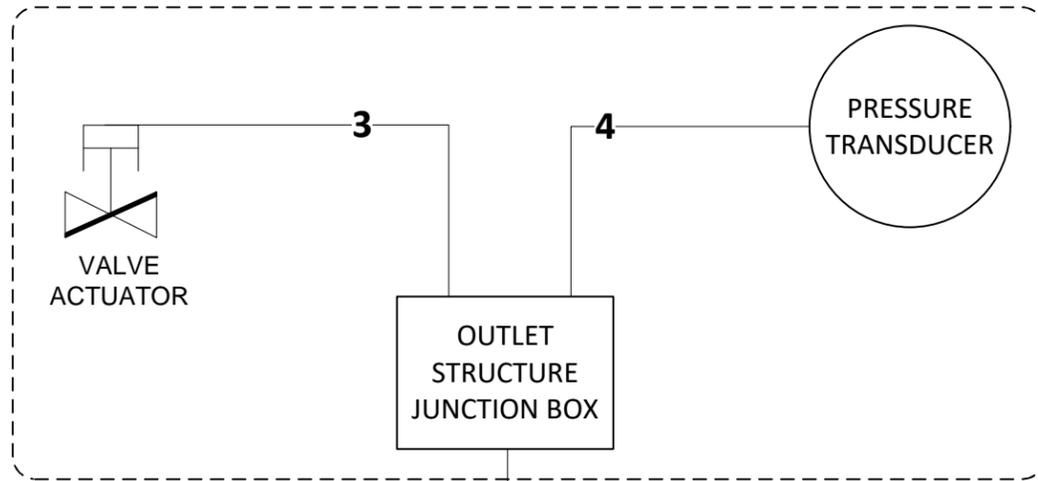
NOTES:

1. BOLT ENCLOSURE TO MOUNTING POLE USING STAINLESS STEEL CHANNEL STRUT AND U-BOLTS (MINIMUM 2 POINTS OF ATTACHMENT).
2. INSTALL "DANGER 120 VOLTS" ADHESIVE BACKED SIGN TO ELECTRICAL ENCLOSURE INTERIOR ON THE SWING PANEL.
3. INSTALL "DANGER ELECTRICAL HAZARD, TURN OFF POWER BEFORE SERVICING" ADHESIVE BACKED SIGN TO ELECTRICAL ENCLOSURE INTERIOR ON THE SWING PANEL.

NOTE:
STANDARD DETAILS APPLIES TO ALL THREE FACILITIES

TITLE: PROPOSED SUPPORT POLE				
PROJECT: CLACKAMAS CMAC				
SITE: SUNNY SIDE, POND A, POND B				
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116	DESIGN BY:	AMH	DATE:	9/22/2016
	DRAWN BY:	AMH	PROJECT NO.:	OP349
	CHECKED BY:		FILE:	
	REVIEWED BY:		DRAWING NO.:	13 OF 15
 WATER ENVIRONMENT SERVICES	APPROVED BY:			

OUTLET STRUCTURE COMPONENTS

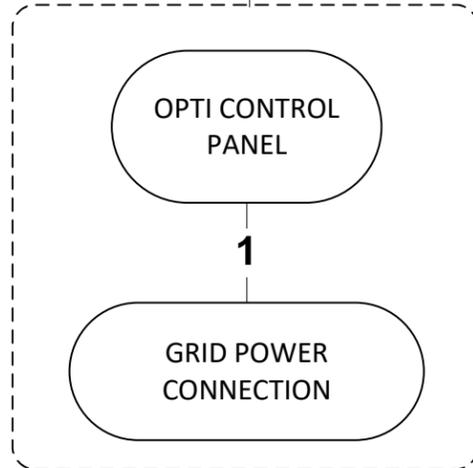


CONDUIT IDENTIFICATION TABLE

CONDUIT ID (FROM DIAGRAM)	CONDUIT TERMINATION POINTS	APPROX CONDUIT LENGTH
1	POWER CONDUIT - SUNNY SIDE	225 FT
1	POWER CONDUIT - POND A	475 FT
1	POWER CONDUIT - POND B	200 FT
2	OPTI CONTROL PANEL - OUTLET STRUCTURE JUNCTION BOX	15 FT
3	OUTLET STRUCTURE JUNCTION BOX - VALVE ACTUATOR	5 FT
4	OUTLET STRUCTURE JUNCTION BOX - LEVEL SENSOR	5 FT

2

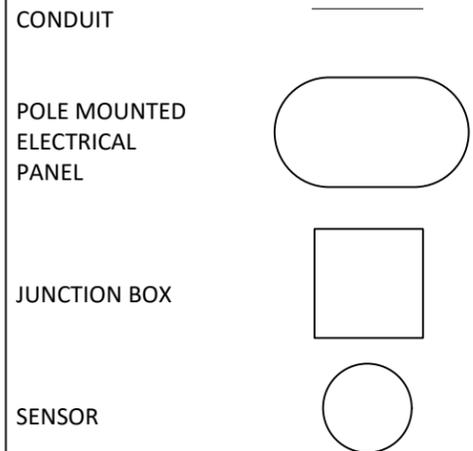
POLE MOUNTED COMPONENTS



CONDUCTOR IDENTIFICATION TABLE

CONDUCTOR ID (LABELLED AT BOTH ENDS DURING INSTALLATION)	CONDUCTOR TERMINATION POINTS	CONDUCTOR PASSES THROUGH CONDUIT ID	FUNCTION	VOLTAGE / SIGNAL	CONDUCTOR MINIMUM GAUGE
1	OPTI CONTROL PANEL - VALVE ACTUATOR	2,3	VALVE POWER - NEUTRAL	120 VAC	16 AWG
2	OPTI CONTROL PANEL - VALVE ACTUATOR	2,3	VALVE POWER - HOT	120 VAC	16 AWG
3	OPTI CONTROL PANEL - VALVE ACTUATOR	2,3	EQUIPMENT GROUND	GND	16 AWG
4	OPTI CONTROL PANEL - VALVE ACTUATOR	2,3	ACTUATOR - FEEDBACK OUT	4-20mA	16 AWG
5	OPTI CONTROL PANEL - VALVE ACTUATOR	2,3	ACTUATOR - SIGNAL IN	4-20mA	16 AWG
6	OPTI CONTROL PANEL - VALVE ACTUATOR	2,3	ACTUATOR - SIGNAL COMMON	12VDC -	16 AWG
	OPTI CONTROL PANEL - PRESSURE TRANSDUCER	2,4	PRESSURE TRANSDUCER LEVEL SENSOR +	12vDC +	16 AWG
8	OPTI CONTROL PANEL - PRESSURE TRANSDUCER	2,4	PRESSURE TRANSDUCER LEVEL SENSOR -	12vDC -	16 AWG
9	OPTI CONTROL PANEL - PRESSURE TRANSDUCER	2,4	PRESSURE TRANSDUCER LEVEL SENSOR SIGNAL	4-20mA	16 AWG

LEGEND



NOT TO SCALE

NOTE:
STANDARD DETAILS APPLIES TO ALL THREE FACILITIES.

NOT TO SCALE NOT FOR CONSTRUCTION

TITLE: ELECTRICAL CONDUIT SCHEDULE			
PROJECT: CLACKAMAS CMAC			
SITE: SUNNY SIDE, POND A, POND B			
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116		DESIGN BY: AMH	DATE: 9/22/2016
		DRAWN BY: AMH	PROJECT NO.: OP349
		CHECKED BY:	FILE:
		REVIEWED BY:	DRAWING NO.:
APPROVED BY:		14 OF 15	

PRESSURE TRANSDUCER PROCURED BY OPTI



KELLER LEVELGAGE

There shall be three Keller Levelgages (1 for each pond). They will come with 40ft of cable, and a pressure range of 0-20ft H2O. They will be vented and come with a bellows to prevent moisture in the vent tube. The bellows shall be placed in the control panel.

OPTI CONTROL PANEL PROVIDED BY OPTI



OPTI CONTROL PANEL

There shall be three Opti Control Panels (1 for each Pond), mounted on a concrete set support pole. Dimensions are 22" x 18" x 9". The Opti Control Panel includes a cellular modem, telemetry equipment and terminal blocks for connection to, interpreting, and transmitting sensor and control data to Opti. All conduits and conductors are to terminate at the Opti control panel.

VALVE PROCURED BY OPTI



PROMATION ACTUATOR WITH PRATT BUTTERFLY VALVE

There shall be three promotion actuators with connected to a Pratt Butterfly valve with an extended stem (1 for each pond). Model number is P/N BF2-120-8998/P4-120PN4-PBU.

Included with each valve is a ANSI 150 slip on flanges welded to a 6" carbon steel pipe for ease of install to weir wall.

NOTE:
STANDARD DETAILS APPLIES TO ALL THREE FACILITIES.
CONTRACTOR IS RESPONSIBLE FOR PROCURING ALL MOUNTING AND WIRING EQUIPMENT NOT LISTED HERE.

TITLE:			MATERIALS PROCURED BY OPTI		
PROJECT:			CLACKAMAS CMAC		
SITE:			SUNNY SIDE, POND A, POND B		
 OptiRTC, Inc. 356 Boylston Street, 2 nd Floor Boston, MA 02116		DESIGN BY:	AMH	DATE:	9/22/2016
		DRAWN BY:	AMH	PROJECT NO.:	OP349
		CHECKED BY:		FILE:	
		REVIEWED BY:		DRAWING NO.:	
		APPROVED BY:			15 OF 15

SAMPLE CONTRACT FORM

GOODS AND SERVICES CONTRACT

This Goods and Services Contract (“Contract”) is entered into between XXXXX (“Contractor”), and Clackamas County Service District No. 1 a political subdivisions of the State of Oregon (“District”) for the purposes of providing OptiRTC site instrument installation.

I. TERM

This Contract shall become effective upon signature of both parties and shall remain in effect until XXXXX. This Contract and any amendments to this Contract will not be effective until approved in writing by an authorized representative of the Board of County Commissioners of Clackamas County acting as the Governing Body for the District. This Contract supersedes and cancels any prior contracts between the parties hereto for similar services.

II. SCOPE

This Contract consists of the following documents which are listed in descending order of precedence and are attached and incorporated by reference, this Contract, the Request for Quotes #2016-11 OptiRTC Site Instrument and Installation Project, issued on September 27, 2016, and the Contractor’s Quote. Work shall be performed in accordance with a schedule approved by the District. The Contractor shall meet the highest standards prevalent in the industry or business most closely involved in providing the appropriate goods or services.

III. COMPENSATION

The District agree to compensate the Contractor on a fee-for-services basis as detailed in this Contract. Invoices submitted for payment in connection with this Contract shall be properly documented and shall indicate pertinent District contract and/or purchase order numbers. All charges shall be billed monthly and will be paid net thirty (30) days from receipt of invoice. The maximum annual compensation authorized under this Contract shall not exceed \$XXXX.

IV. CONTRACT PROVISIONS

1. ACCESS TO RECORDS. Contractor shall maintain books, records, documents, and other evidence and accounting procedures and practices sufficient to reflect properly all costs of whatever nature claimed to have been incurred and anticipated to be incurred in the performance of this Contract. District and their duly authorized representatives shall have access to the books, documents, papers, and records of Contractor which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Such books and records shall be maintained by Contractor for a minimum of three (3) years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later.

2. AVAILABILITY OF FUNDS. District certify that sufficient funds are available and authorized for expenditure to finance costs of this Contract within its current annual appropriation or expenditure limitation, provided, however, that continuation of this Contract, or any extension, after the end of the fiscal period in which it is written, is contingent on a new appropriation or limitation for each succeeding fiscal period sufficient in amount, in the exercise of the District’s reasonable administrative discretion, to continue to make payments under this Contract.

3. CAPTIONS. The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.

4. COMPLIANCE WITH APPLICABLE LAW. Contractor shall comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the work to be done under this Contract. Contractor specifically agrees to comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules, and regulations. Contractor shall also comply with the Americans with Disabilities Act of 1990 (Pub. L. No. 101-336), title VI of the civil Rights Act of 1964, Section V of the Rehabilitation Act of 1973, ORS 659A.142, and all regulations and administrative rules established pursuant to those laws. Contractor further agrees to make payments promptly when due, to all persons supplying to such Contractor, labor or materials for the prosecution of the work provided in this Contract; pay all contributions or amounts due the Industrial Accident Funds from such Contractor responsibilities incurred in the performance of this Contract; not permit any lien or claim to be filed or prosecuted against the state on account of any labor or material furnished; pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. If Contractor fails or refuses to make any such payments required herein, the appropriate District official may pay such claim. Any payment of a claim in the manner authorized in this section shall not relieve the Contractor or Contractor's surety from obligation with respect to unpaid claims. Contractor shall promptly pay any person or entity that furnishes medical care to Contractor's employees those sums which Contractor agreed to pay for such services and all money Contractor collected or deducted from employee's wages to provide such services.

5. EXECUTION AND COUNTERPARTS. This Contract may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

6. GOVERNING LAW. This Contract shall be governed and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, or suit between District and Contractor that arises out of or relates to the performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Clackamas County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.

7. HAZARD COMMUNICATION. Contractor shall notify District prior to using products containing hazardous chemicals to which District employees may be exposed. Products containing hazardous chemicals are those products defined by Oregon Administrative Rules, Chapter 437. Upon District's request, Contractor shall immediately provide Material Safety Data Sheets for the products subject to this provision.

8. INDEMNITY, RESPONSIBILITY FOR DAMAGES. The Contractor agrees to indemnify, hold harmless and defend the District AND Clackamas County, and their officers, commissioners, agents and employees from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, arising out of or based upon damage or injuries to persons or property caused by the errors, omissions, fault or negligence of the Contractor or the Contractor's employees or agents.

9. INDEPENDENT CONTRACTOR STATUS. The service(s) to be rendered under this Contract are those of an independent contractor. Although the District reserves the right to determine (and modify) the delivery schedule for the Work to be performed and to evaluate the quality of the completed performance, District cannot and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the work. Contractor is not to be considered an agent or employee of District for any purpose, including, but not limited to: (A) The Contractor will be solely responsible for payment of any Federal or State taxes required as a result of this Contract; (B) This Contract is not intended to entitle the Contractor to any benefits generally granted to the District employees, including, but not limited to, vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers' Compensation, unemployment compensation, or retirement benefits (except insofar as benefits are otherwise required by law

if the Contractor is presently a member of the Oregon Public Employees Retirement System); (C) If the Contractor has the assistance of other persons in the performance of this Contract, and the Contractor is a subject employer, the Contractor shall qualify and remain qualified for the term of this Contract as an insured employer under Oregon Revised Statutes (“ORS”) Chapter 656.

At present, the Contractor certifies that he or she, if an individual is not a program, County, District or Federal employee. The Contractor, if an individual, certifies that he or she is not a member of the Oregon Public Employees Retirement System.

10. INSURANCE. Insurance policies, which cannot be excess to a self-insurance program, are to be issued by an insurance company authorized to do business in the State of Oregon. Contractor shall provide insurance as indicated below:

A. COMMERCIAL GENERAL LIABILITY

The Contractor agrees to furnish the District evidence of commercial general liability insurance in the amount of not less than \$1,000,000 combined single limit per occurrence/\$2,000,000 general annual aggregate for personal injury and property damage for the protection of the District, its officers, commissioners, agents and employees against liability for damages because of personal injury, bodily injury, death or damage to property, including loss of use thereof, in any way related to this Contract. The general aggregate shall apply separately to this project / location. The District, at its option, may require a complete copy of the above policy.

B. AUTOMOBILE LIABILITY

The Contractor agrees to furnish the District evidence of business automobile liability insurance in the amount of not less than \$1,000,000 combined single limit for bodily injury and property damage for the protection of the District, its officers, commissioners, agents and employees against liability for damages because of bodily injury, death or damage to property, including loss of use thereof in any way related to this Contract. The District, at its option, may require a complete copy of the above policy.

C. Contractor shall provide District a certificate of insurance naming the District and Clackamas County and their agents, officers, and employees as an additional insured. If Contractor’s insurance policy does not include a blanket endorsement for additional insured status when/where required by written contract (as required in this Contract), the insurance, shall include the District and Clackamas County and their agents, officers, and employees as expressly scheduled additional insured. Use CG 20 10 or its equivalent. Such insurance shall provide sixty (60) days written notice to the District in the event of a cancellation or material change and include a statement that no act on the part of the insured shall affect the coverage afforded to the District under this insurance. This policy(s) shall be primary insurance with respect to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it.

D. If the Contractor has the assistance of other persons in the performance of this Contract, and the Contractor is a subject employer, the Contractor agrees to qualify and remain qualified for the term of this Contract as an insured employer under ORS 656. The Contractor shall maintain employer’s liability insurance with limits of \$100,000 for each accident, \$100,000 per disease for each employee, and \$500,000 each minimum policy limit.

E. If any other required liability insurance is arranged on a “claims made” basis, “tail” coverage will be required at the completion of this Contract for a duration of thirty-six (36) months or the maximum time period the Contractor’s insurer will provide “tail” coverage as subscribed, whichever is greater, or continuous “claims made” liability coverage for thirty-six (36) months following the contract completion. Continuous “claims made” coverage will be acceptable in lieu of “tail” coverage, provided it’s retroactive date is on or before the effective date of this Contract.

F. There shall be no cancellation, material change, exhaustion of aggregate limits or intent not to renew insurance coverage without 60 days written notice by the Contractor to the District. This policy(s) shall be primary insurance with respect to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it.

G. Contractor shall require that all of its subcontractors of any tier provide insurance coverage (including additional insured provisions) and limits identical to the insurance required of the Contractor under this Contract, unless this requirement is expressly modified or waived by the District.

11. LIMITATION OF LIABILITIES. Except for liability arising under or related to sections 14(A) or 22(B), neither party shall be liable for (i) any indirect, incidental, consequential or special damages under this Contract or (ii) any damages of any sort arising solely from the termination of this Contract in accordance with its terms. This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.

12. NOTICES. Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder shall be given in writing by personal delivery, facsimile, or mailing the same, postage prepaid, to Contractor or District at the address or number set forth on the signature page of this Contract, or to such other addresses or numbers as either party may hereafter indicate. Any communication or notice so addressed and mailed shall be deemed to be given five (5) days after mailing. Any such communication or notice delivered by facsimile shall be deemed to be given when receipt of transmission is generated by the transmitting machine. To be effective against District, such facsimile transmission must be confirmed by telephone notice to District's supervising representative. Any communication or notice by personal delivery shall be deemed to be given when actually delivered.

13. OWNERSHIP OF WORK PRODUCT. All work product of Contractor that results from this Contract (the "Work Product") is the exclusive property of District. District and Contractor intend that such Work Product be deemed "work made for hire" of which District shall be deemed the author. If for any reason the Work Product is not deemed "work for hire," Contractor hereby irrevocably assigns to District all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark or trade secret, or any other state or federal intellectual property law or doctrine. Contractor shall execute such further documents and instruments as District may reasonably request in order to fully vest such rights in District. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.

14. REPRESENTATIONS AND WARRANTIES. Contractor represents and warrants to District that (1) Contractor has the power and authority to enter into and perform this Contract; (2) this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; (3) the Work under this Contract shall be performed in a good and workmanlike manner and in accordance with the highest professional standards; and (4) Contractor shall at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided.

15. SURVIVAL. All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in the Section VI and the following Sections of Section III: 1, 6, 8, 11, 13, 14, 15, and 21.

16. SEVERABILITY. If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

17. SUBCONTRACTS AND ASSIGNMENTS. Contractor shall not enter into any subcontracts for any of the work required by this Contract, or assign or transfer any of its interest in this Contract, without obtaining prior written approval from the District. In addition to any provisions the District may require, Contractor

shall include in any permitted subcontract under this Contract a requirement that the subcontractor be bound by this section and Sections 1, 8, 13, and 26 as if the subcontractor were the Contractor. District's consent to any subcontract shall not relieve Contractor of any of its duties or obligations under this Contract.

18. SUCCESSORS IN INTEREST. The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.

19. TAX COMPLIANCE CERTIFICATION. Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle District to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to DISTRICT'S setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. DISTRICT'S shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance. These remedies are cumulative to the extent the remedies are not inconsistent, and DISTRICT'S may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

20. TERMINATION. This Contract may be terminated for the following reasons: (A) This Contract may be terminated at any time by mutual consent of the parties, or by the District for convenience upon thirty (30) days' written notice to the Contractor; (B) District may terminate this Contract effective upon delivery of notice to Contractor, or at such later date as may be established by the District, if (i) federal or state laws, rules, regulations, or guidelines are modified, changed, or interpreted in such a way that either the work under this Contract is prohibited or the District are prohibited from paying for such work from the planned funding source; or (ii) any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, or not renewed; (C) This Contract may also be immediately terminated by the District for default (including breach of Contract) if (i) Contractor fails to provide services or materials called for by this Contract within the time specified herein or any extension thereof; or (ii) Contractor fails to perform any of the other provisions of this Contract or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of notice from the District, fails to correct such failure within ten (10) business days; and (D) If sufficient funds are not provided in future approved budgets of the District (or from applicable federal, state, or other sources) to permit the District in the exercise of its reasonable administrative discretion to continue this Contract, or if the program for which this Contract was executed is abolished, District may terminate this Contract without further liability by giving Contractor not less than ninety (90) days' notice.

21. REMEDIES. Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this Contract, unless District expressly directs otherwise in such Notice of

Termination. Upon termination of this Contract, Contractor shall deliver to District all documents, information, works-in-progress and other property that are or would be deliverables had the Contract work been completed. Upon District's request, Contractor shall surrender to anyone District designates, all documents, research or objects or other tangible things needed to complete the work.

22. NO THIRD PARTY BENEFICIARIES. District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

23. TIME IS OF THE ESSENCE. Contractor agrees that time is of the essence under this Contract.

24. FOREIGN Contractor. If the Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporate Division, all information required by those agencies relative to this Contract. The Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.

25. FORCE MAJEURE. Neither District nor Contractor shall be held responsible for delay or default caused by fire, riot, acts of God, or war where such cause was beyond, respectively, District's or Contractor's reasonable control. Contractor shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.

26. WAIVER. The failure of District to enforce any provision of this Contract shall not constitute a waiver by District of that or any other provision.

27. RECYCLING. In the performance of this Contract the Contractor shall use, to the maximum extent economically feasible, recycled paper.

28. COMPLIANCE. Pursuant to the requirements of ORS 279B.020 and 279B.220 through 279B.235 and Article XI, Section 10, of the Oregon Constitution, the following terms and conditions are made a part of this Contract:

(A) Contractor shall: (i) Make payments promptly, as due, to all persons supplying to the Contractor labor or materials for the prosecution of the work provided for in this Contract; (ii) Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of this Contract; (iii) Not permit any lien or claim to be filed or prosecuted against the COUNTY on account of any labor or material furnished.

(B) If the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a subcontractor by any person in connection with this Contract as such claim becomes due, the proper officer representing the DISTRICT may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due the Contractor by reason of this Contract.

(C) The Contractor shall pay employees for work in accordance with ORS 279B.020 and ORS 279B.235, which is incorporated herein by this reference. All subject employers working under the contract are either employers that will comply with ORS 656.017 or employers that are exempt under ORS 656.126.

(D) The Contractor shall promptly, as due, make payment to any person or copartnership, association or corporation furnishing medical, surgical and hospital care or other needed care and attention incident to sickness and injury to the employees of the Contractor, of all sums which the Contractor agrees to pay for such services and all moneys and sums which the Contractor collected or deducted from the wages of the Contractor's employees pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

INSURANCE CERTIFICATES
(To be submitted at time of contract execution)