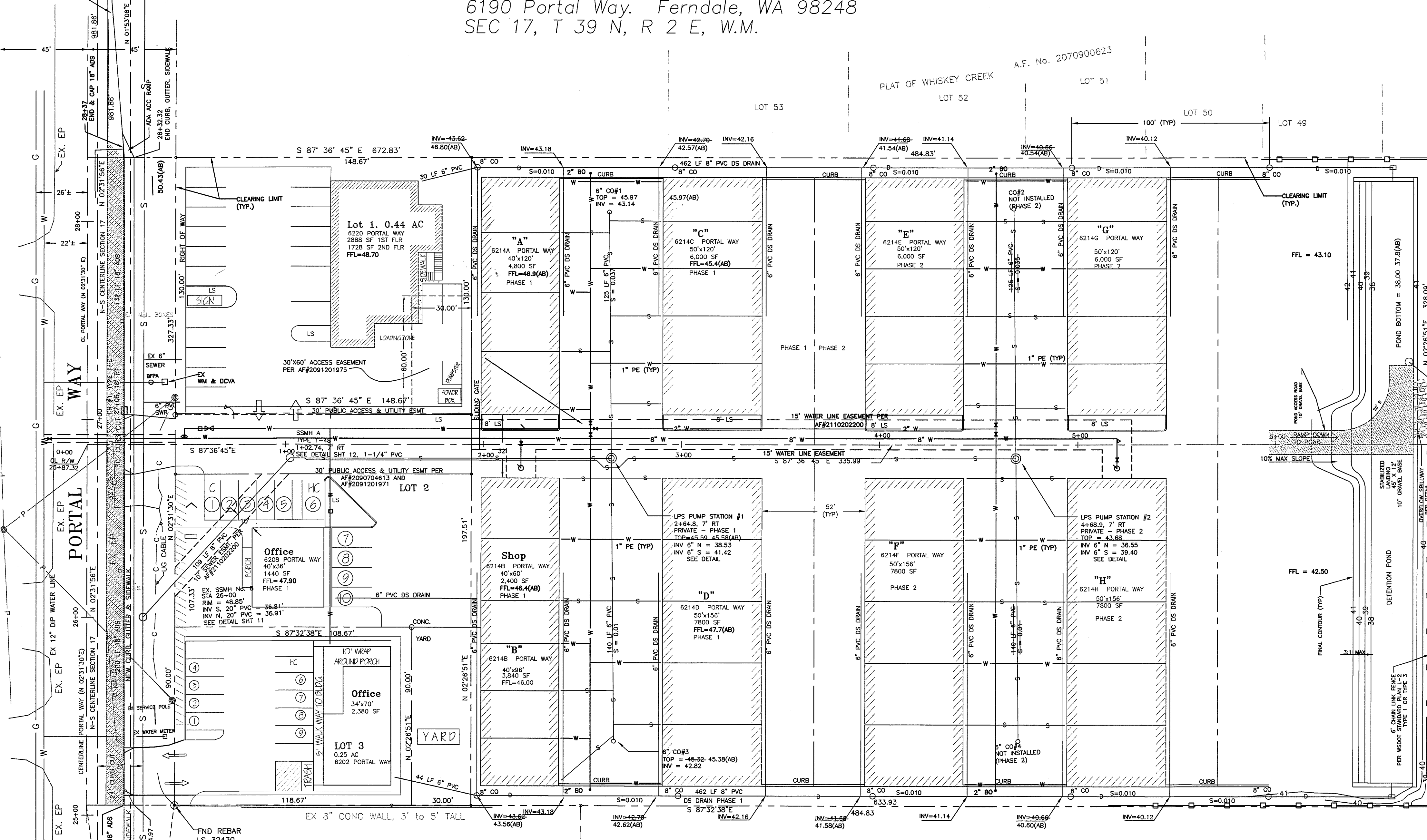


DWS PORTAL WAY OFFICE & STORAGE COMPLEX

6190 Portal Way, Ferndale, WA 98248
SEC 17, T 39 N, R 2 E, W.M.

CALL 48 HOURS
BEFORE YOU DIG
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17/16
E 1/4 COR PER AF 961023004



SCALE: 1 INCH = 30 FEET

- ABBREVIATIONS**
- BLDG - BUILDING
 - BFPA - BACKFLOW PREVENTION ASSEMBLY
 - BO - BLOW OFF
 - CB - CATCH BASIN
 - CL - CLASS, OR CENTER LINE
 - CO - CLEAN OUT
 - D - DRAIN
 - DIP - DUCTILE IRON PIPE
 - DS - DOWN SPOUT
 - EX - EXISTING
 - FLL - FINISHED FLOOR LEVEL
 - INT - INTERSECTION
 - INV - INVERT
 - LS - LANDSCAPING
 - LT - LEFT
 - PE - POLYETHYLENE
 - PVC - POLYVINYL CHLORIDE
 - RT - RIGHT
 - S - SEWER OR SLOPE (FT/FT)
 - SDMH - STORM DRAIN MAN HOLE
 - SF - SQUARE FEET
 - SSMH - SANITARY SEWER MAN HOLE
 - TB - THRUST BLOCK
 - TBM - TEMPORARY BENCH MARK
 - VPI - VERTICAL POINT OF INTERSECTION
 - W - WATER
 - WM - WATER METER
- CONTENTS**
- SHEET 1 - COVER SHEET
 - SHEET 2 - EXISTING SITE PLAN
 - SHEET 3 - SWPPP
 - SHEET 4 - ROAD & SEWER PLAN & PROFILE
 - SHEET 5 - SEWER & STORM DRAIN DETAILS
 - SHEET 6 - STORMWATER POND PLAN & DETAILS
 - SHEET 7 - WATER SYSTEM PLAN
 - SHEET 8 - WATER SYSTEM DETAILS
 - SHEET 9 - GRADING & PAVING PLAN
 - SHEET 10 - PORTAL WAY PLAN & PROFILE
 - SHEET 11 - CONSTRUCTION NOTES & DETAILS
 - SHEET 12 - CONSTRUCTION DETAILS

PROJECT SUMMARY

Site Address: 6208 Portal Way, Ferndale, WA 98248
Parcel No.: 390217 306149 0000
Site Area: 4.69 AC
Zoning: Highway Commercial
Legal Description:
W1/2 S1/2 S1/2 Sec 17, Twp. 39 N, Rge. 2 E, W.M., less road.

Owner: DWS Portal Way LLC
New Building Gross Floor Areas: 68,232 SF Total (1.57 AC)

Office #1:	1440 SF	Bldg "P":	7800 SF
Bldg "A":	4800 SF	Bldg "Q":	6000 SF
Bldg "B":	6240 SF	Bldg "H":	7800 SF
Bldg "C":	6000 SF		
Bldg "D":	7800 SF		
Bldg "E":	6000 SF	Office #2:	2380 SF

Impervious Areas:
Buildings: 1.62 AC
Concrete: 0.94 AC

New Building Uses:
Office = Office, Buildings A - H = Storage
New Building Addresses: (Note: All address are on Portal Way)

Lot 1:	6220	Bldg "E":	6214 E
Office (Lot 2):	6208	Bldg "F":	6214 F
Lot 3:	6202	Bldg "G":	6214 G
Bldg "A":	6214 A	Bldg "H":	6214 H
Bldg "B":	6214 B		
Bldg "C":	6214 C		
Bldg "D":	6214 D		

Parking Spaces:
Offices: 11 each including 1 HC each.
Buildings A - H Extensive parking in front of each unit.

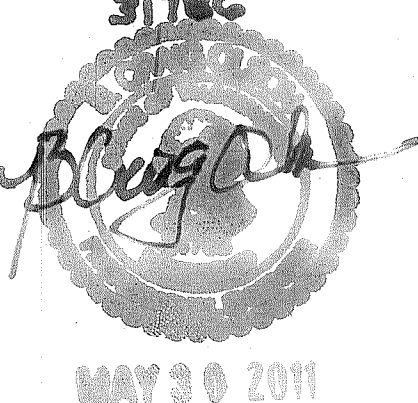
KEY

- GAS
- DATA CABLE
- POWER
- RIGHT OF WAY
- PROPERTY LINE
- STORM DRAIN
- WATER
- SEWER
- FENCE
- BUILDING WALL
- POROUS PC CONCRETE
- STANDARD PC CONCRETE
- ASPHALT PAVING
- CATCH BASIN
- MAN HOLE
- FIRE HYDRANT
- BOLLARD
- WATER VALVE
- FINAL ELEVATION

Engineer's Certification:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS IN DWS PORTAL WAY OFFICE & STORAGE COMPLEX AT 6190 PORTAL WAY, FERNDALE, WA, HAVE BEEN INSPECTED BY B. CRAIG OLSON AND TO THE BEST OF MY KNOWLEDGE, HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE."



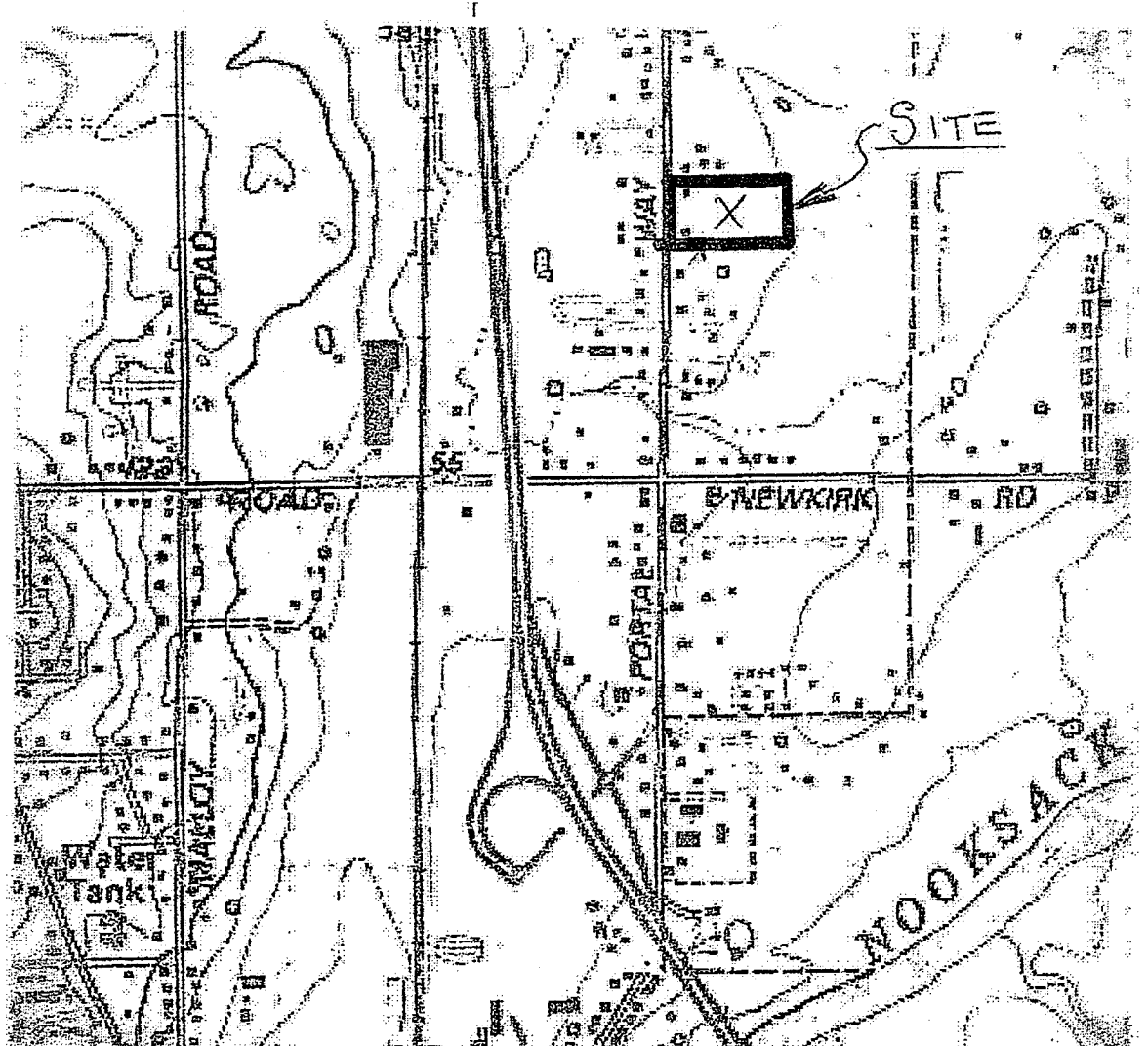
APPROVED
DEC 27 2012
BY J. M. Olson, P.E.
CITY OF FERNDALE



Craig Olson, P.E.
1040 Piedmont Place
Bellingham, WA 98229
360.510.0480

VICINITY MAP

SCALE: 1" = 1000'



Surveyor's Certification:
"I CERTIFY THAT THE LOCATIONS, ELEVATIONS, DEPTHS, AND AS-BUILT COMMENTS REFLECTING MATERIALS ACTUALLY USED DURING CONSTRUCTION ACCURATELY REFLECT EXISTING FIELD CONDITIONS AS DETERMINED BY ME OR UNDER MY DIRECT SUPERVISION ON THIS DATE 06/27/11"

AS-BUILT

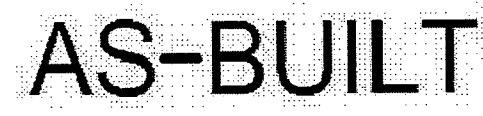
SHEET:

1

OF: 12

COVER SHEET

Pioneer Post Frame, Inc.
DWS Portal Way Office and Storage
6190 Portal Way, Ferndale, WA 98248
SEC 17, T 39 N, R 2 E, W.M.



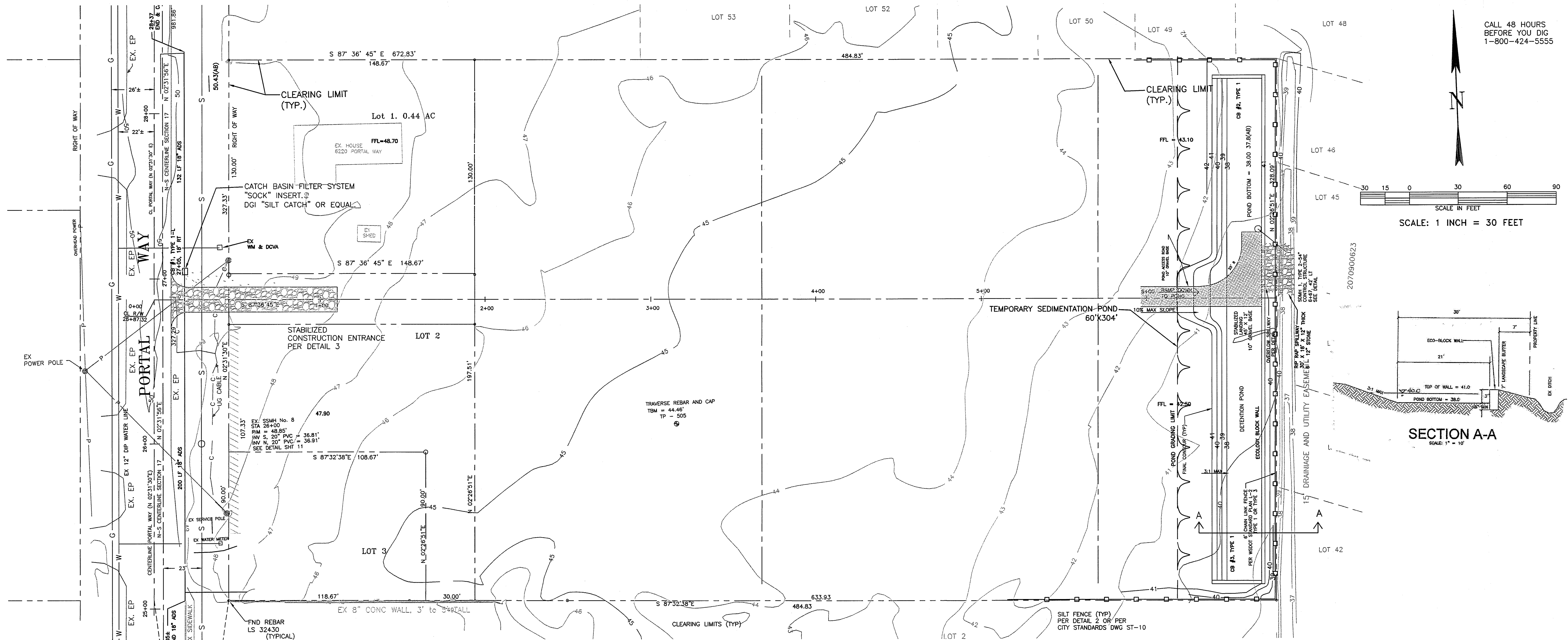
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E 1/4 COR PER AF 961023004

APPROVED
DEC 27 2012
E. M. J. P.E.
CITY OF FERRISDALE



SHEET: 2 OF 12

00538.002 12/28/12 stt



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BEFORE YOU DIG
1-800-424-5555

SCALE: 1 INCH = 30 FEET

SECTION A-A
SCALE: 1" = 10'

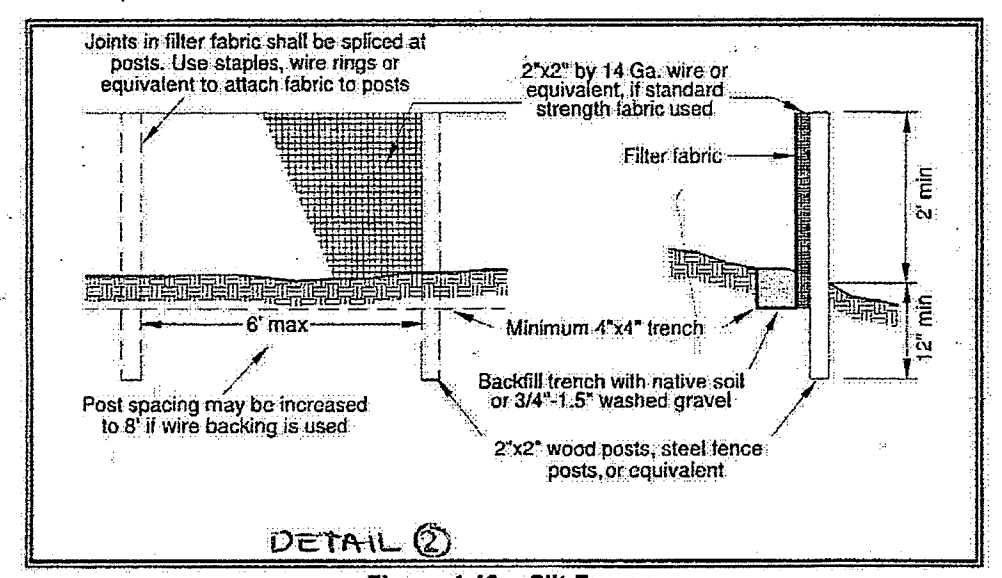


Figure 4.19 - Silt Fence

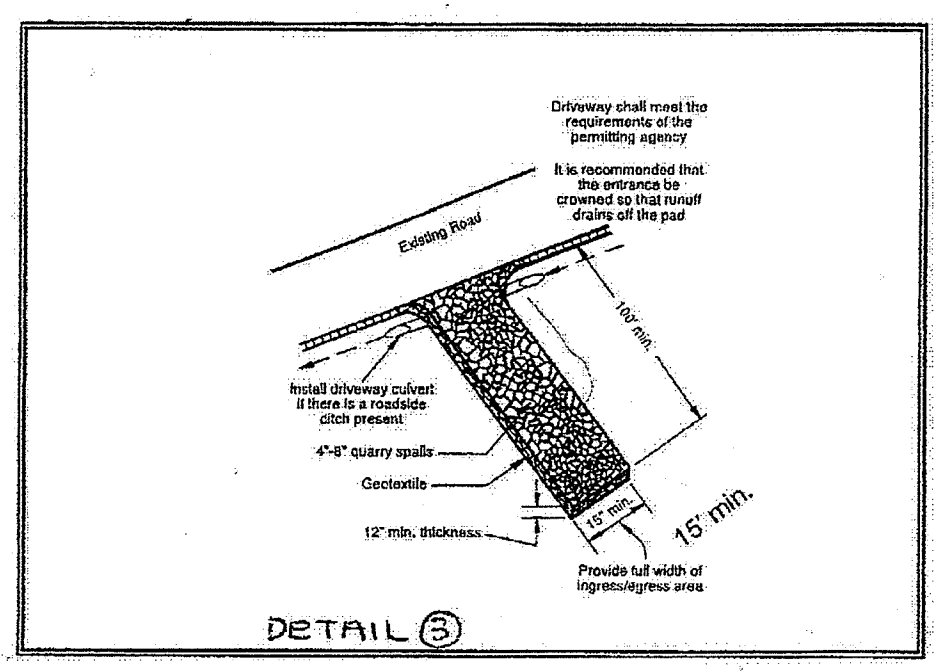


Figure 4.2 - Stabilized Construction Entrance

Construction Stormwater Pollution Prevention (SWPPP)

- #1: **Mark Clearing Limits:** Clearing limits are established by existing fence lines on the North and South property lines. The Eastern clearing limit shall be staked by the contractor to provide a 7' landscape buffer from the existing eastern fence line.
- #2: **Establish construction access:** Stone stabilized Construction Access shall conform to Detail 3, this sheet.
- #3: **Control Flow rates:** Flow rates shall be controlled through the installation of the detention pond and control structure shown on these plans.
- #4: **Install Sediment Controls:** Sediment control shall be installed as shown on these plans, detail 2, and maintained in conformance with applicable DOE requirements.
- #5: **Stabilize Soils:** Contractor shall strip organic soils from the building pads and pavement areas down to clean, native sand. Stock-piled materials subject to erosion shall be covered by tarps or 4" mulch.
- #6: **Protect Slopes:** Most of the site is relatively flat. However, the 3:1 side slopes to be constructed on the west edge of the pond shall be stabilized with straw mulch, jute matting or plastic tarps.
- #7: **Protect drain inlets:** A total of three drain inlets are to be installed for this construction. Two catch basins, CB#2 and CB#3, adjacent to the detention pond and CB#1, at the new curb line on Portal Way. Contractor shall install block & gravel filters or a catch basin filter system insert "Sock" such as DGI "Silt Catch" or equal.
- #8: **Stabilize channels and outlets:** Discharge points shall be covered in erosion control blanket and rip-rap as specified on sheet 6.
- #9: **Control Pollutants:** Pollutants are controlled through source control, flat site slopes and sedimentation in the temporary sedimentation pond.
- #10: **Control De-watering:** Should dewatering be required for trench excavation, outflow should be directed to the temporary sedimentation pond located as shown on the SWPPP, Sheet 3 of the plans.
- #11: **Maintain BMP's:** Temporary and permanent BMP's shall be maintained in accordance with applicable sections of the DOE Surface Water manual and as directed by City of Ferndale personnel and/or the Certified Erosion and Sediment Control Lead (CESCL).
- #12: **Manage the project:** The Contractor, the design professional and the CESCL shall work together to ensure excellent management and control of the project in compliance with applicable DOE standards. Maintain silt fences, catch basin filters, slope stability and all SWPPP elements to ensure they perform their intended function.

Standard Notes

- Approval of this erosion/sedimentation control (ESC) plan does not constitute an approval of permanent road or drainage design (e.g. size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
- The implementation of these ESC plans and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the applicant/contractor until all construction is completed and approved and vegetation/landscaping is established.
- The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field prior to construction. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the applicant/contractor for the duration of construction.
- The ESC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to ensure that sediment and sediment laden water do not enter the drainage system, roadways, or violate applicable water standards.
- The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment-laden water do not leave the site.
- The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to ensure their continued functioning.
- The ESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within the 48 hours following a major storm event.
- At no time shall more than one foot of sediment be allowed to accumulate within a trapped catch basin. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment laden water into the downstream system.
- Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

Wet Season Construction Notes

- During the wet season (October 1 to April 30), additional Erosion & Sedimentation Control (ESC) requirements shall include the following:
 1. No soil mounds, embankments, stockpiles or other soil slopes which contain fine particles prone to erosion and siltation shall remain exposed for more than two consecutive working days. This two day requirement may be applied at other times of the year if a storm event warrants more conservative measures.
 2. All exposed soils subject to erosion as described above shall be stabilized at the end of a work day prior to a weekend, holiday or predicted storm event.
 3. These requirements shall not apply to sandy soils with low siltation potential which are located in a flat area with no potential of silt-laden water leaving the site.

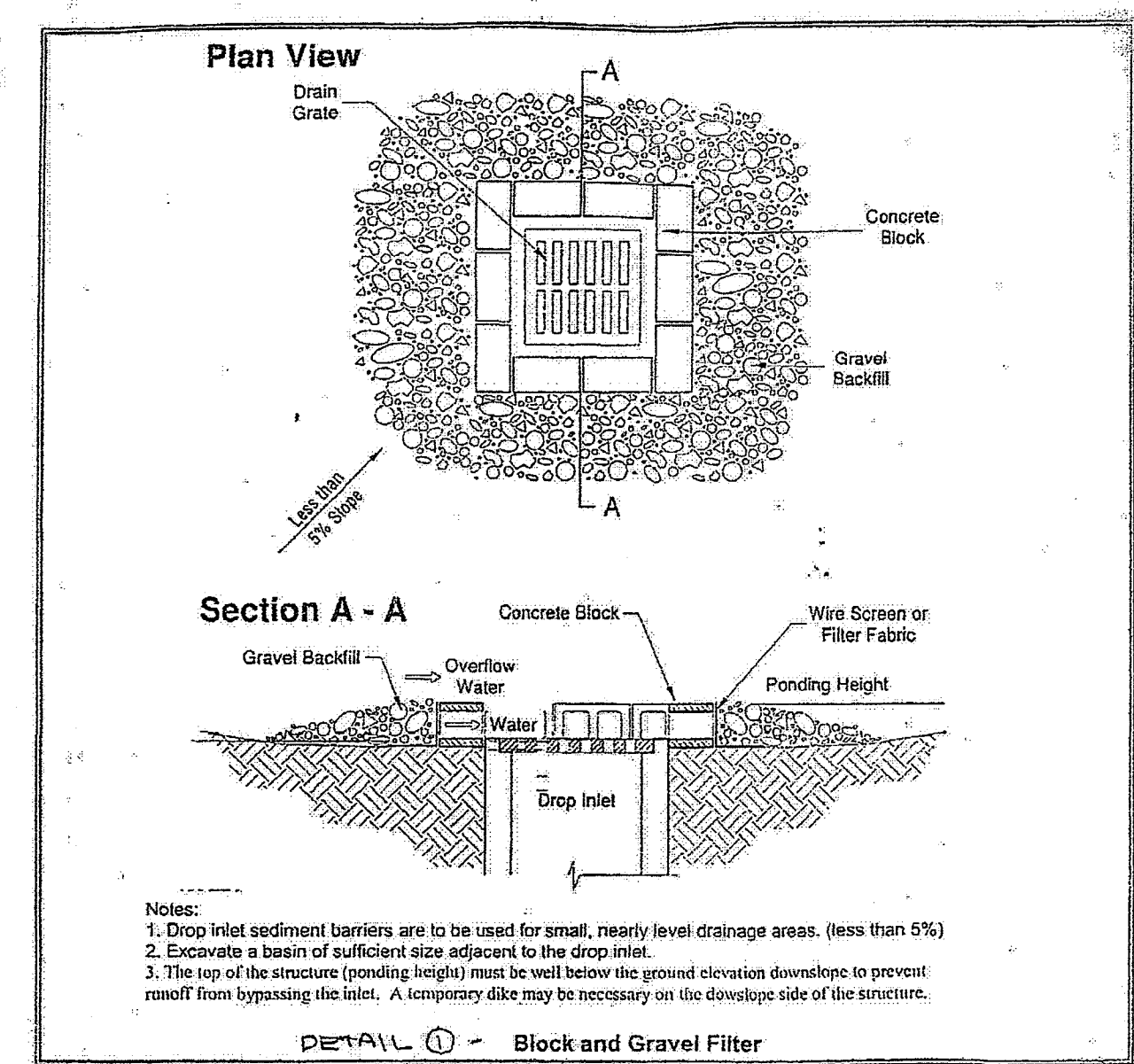
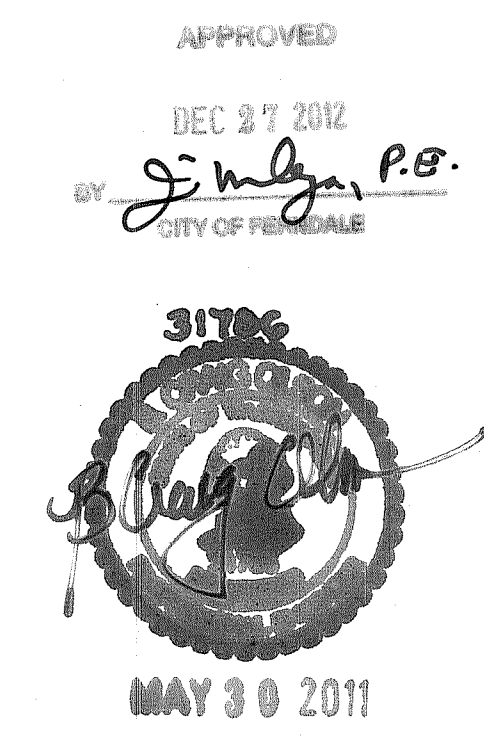
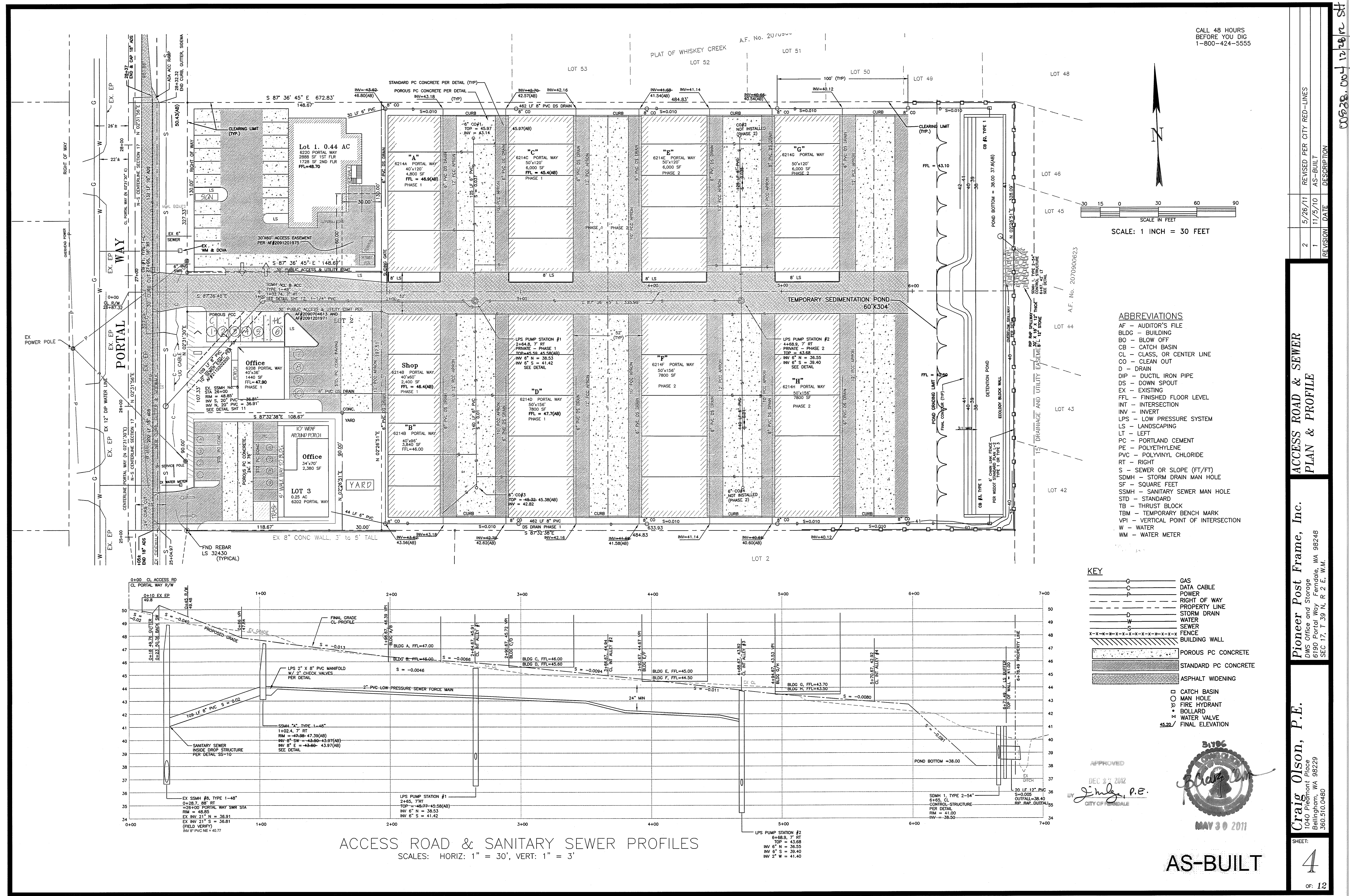


Figure 4.1 - Block and Gravel Filter



AS-BUILT

1	5/26/11	REVISED PER CITY RED-LINES
	11/15/10	AS-BUILT
	DATE	DESCRIPTION
SWPPP Stormwater Pollution Prevention Plan		
Pioneer Post Frame, Inc. DWS Office and Storage 6190 Portal Way Ferndale, WA 98248 SEC 17, T 39 N, R 2 E, W.M.		
Craig Olson, P.E. 1040 Piedmont Place Bellingham, WA 98229 360.510.0480		
SHEET: 3		
OF: 12		



- ABBREVIATIONS**
- AF - AUDITOR'S FILE
 - BLDG - BUILDING
 - BO - BLOW OFF
 - CB - CATCH BASIN
 - CL - CLASS, OR CENTER LINE
 - CO - CLEAN OUT
 - D - DRAIN
 - DIP - DUCTILE IRON PIPE
 - DS - DOWN SPOUT
 - EX - EXISTING
 - FLL - FINISHED FLOOR LEVEL
 - INT - INTERSECTION
 - INV - INVERT
 - LPS - LOW PRESSURE SYSTEM
 - LS - LANDSCAPING
 - LT - LEFT
 - PC - PORTLAND CEMENT
 - PE - POLYETHYLENE
 - PVC - POLYVINYL CHLORIDE
 - RT - RIGHT
 - S - SEWER OR SLOPE (FT/FT)
 - SDMH - STORM DRAIN MAN HOLE
 - SF - SQUARE FEET
 - SSMH - SANITARY SEWER MAN HOLE
 - STD - STANDARD
 - TB - THRUST BLOCK
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- KEY**
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 - STORM DRAIN
 - WATER
 - SEWER
 - FENCE
 - BUILDING WALL
 - POROUS PC CONCRETE
 - STANDARD PC CONCRETE
 - ASPHALT WIDENING
 - CATCH BASIN
 - MAN HOLE
 - FIRE HYDRANT
 - BOLLARD
 - WATER VALVE
 - 45.20/ FINAL ELEVATION

APPROVED
DEC 27 2012
BY: *Jim P.E.*
CITY OF FERNDALE



AS-BUILT

**ACCESS ROAD & SEWER
PLAN & PROFILE**

Pioneer Post Frame, Inc.
DWS Office and Storage
6190 Portal Way, Ferndale, WA 98248
SEC 17, T 39 N, R 2 E, W.M.

5/26/11
2
REVISED PER CITY RED-LINES

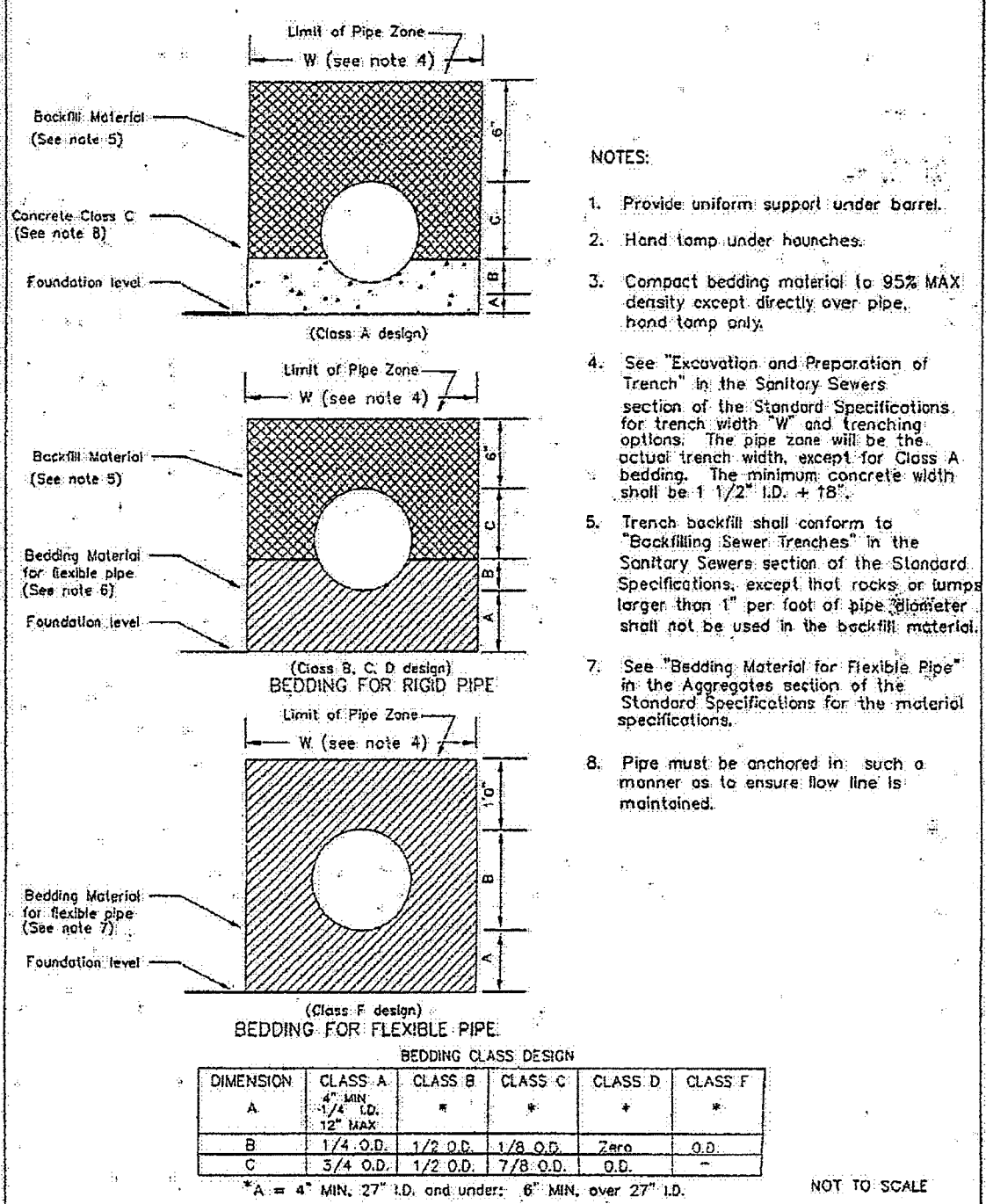
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AS-BUILT

REVISION DATE DESCRIPTION

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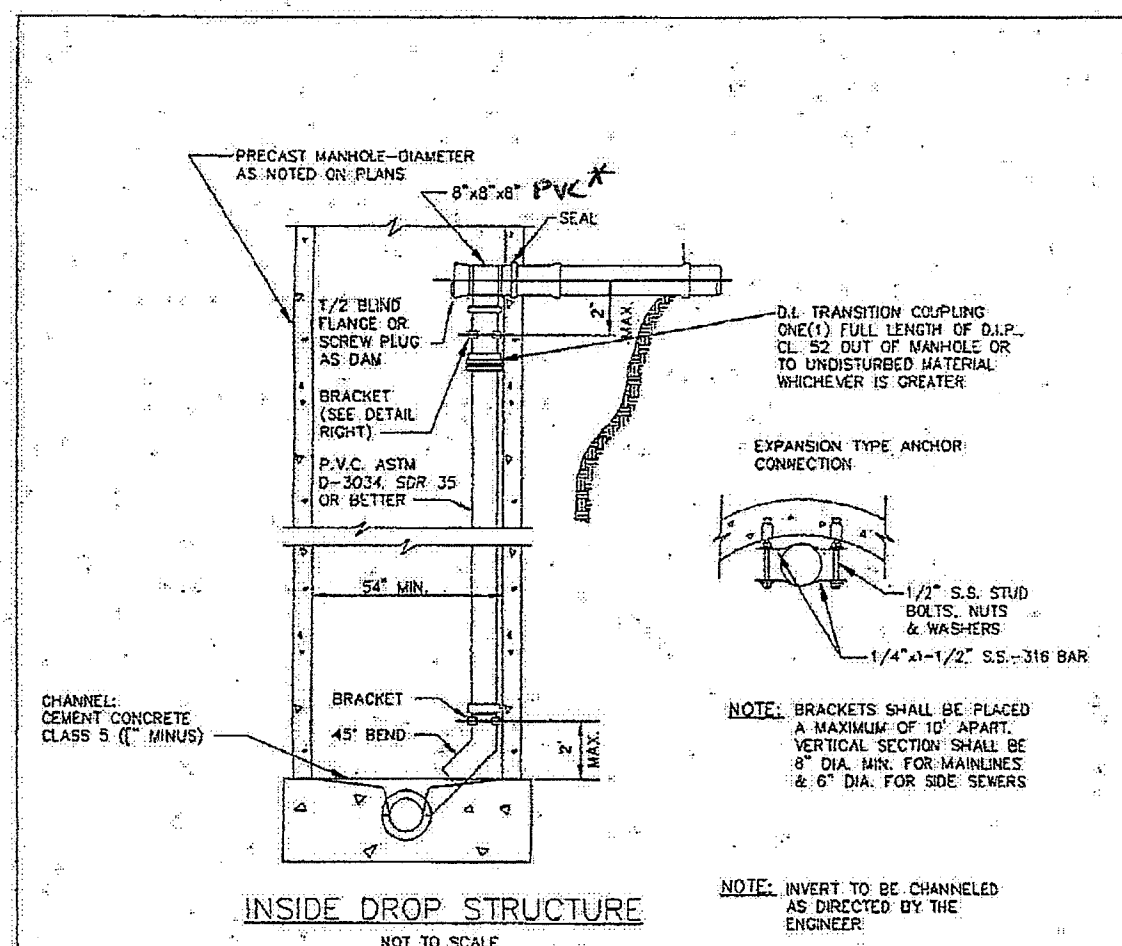
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OF: 12

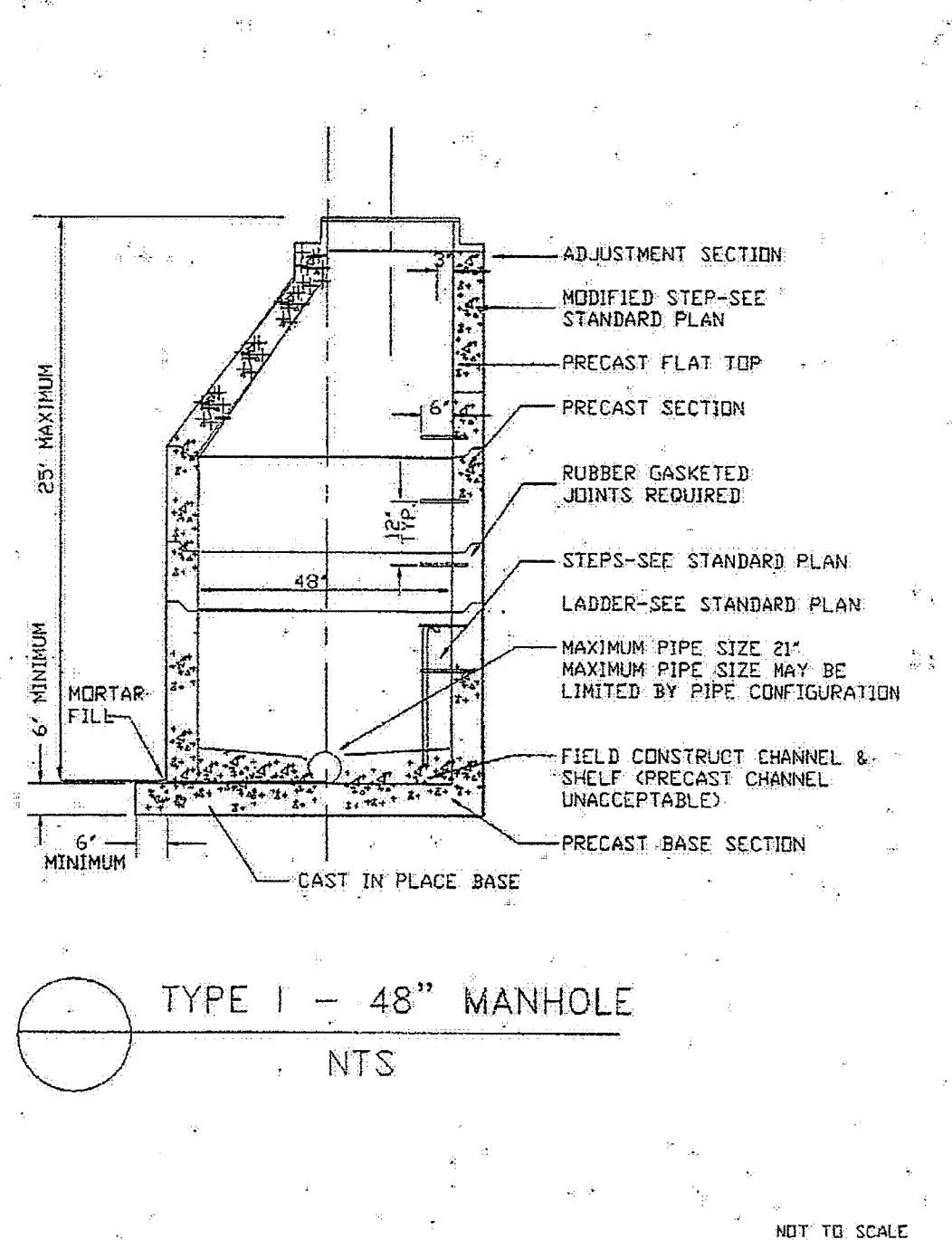


APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-1
Public Works Director Date SANITARY SEWERS

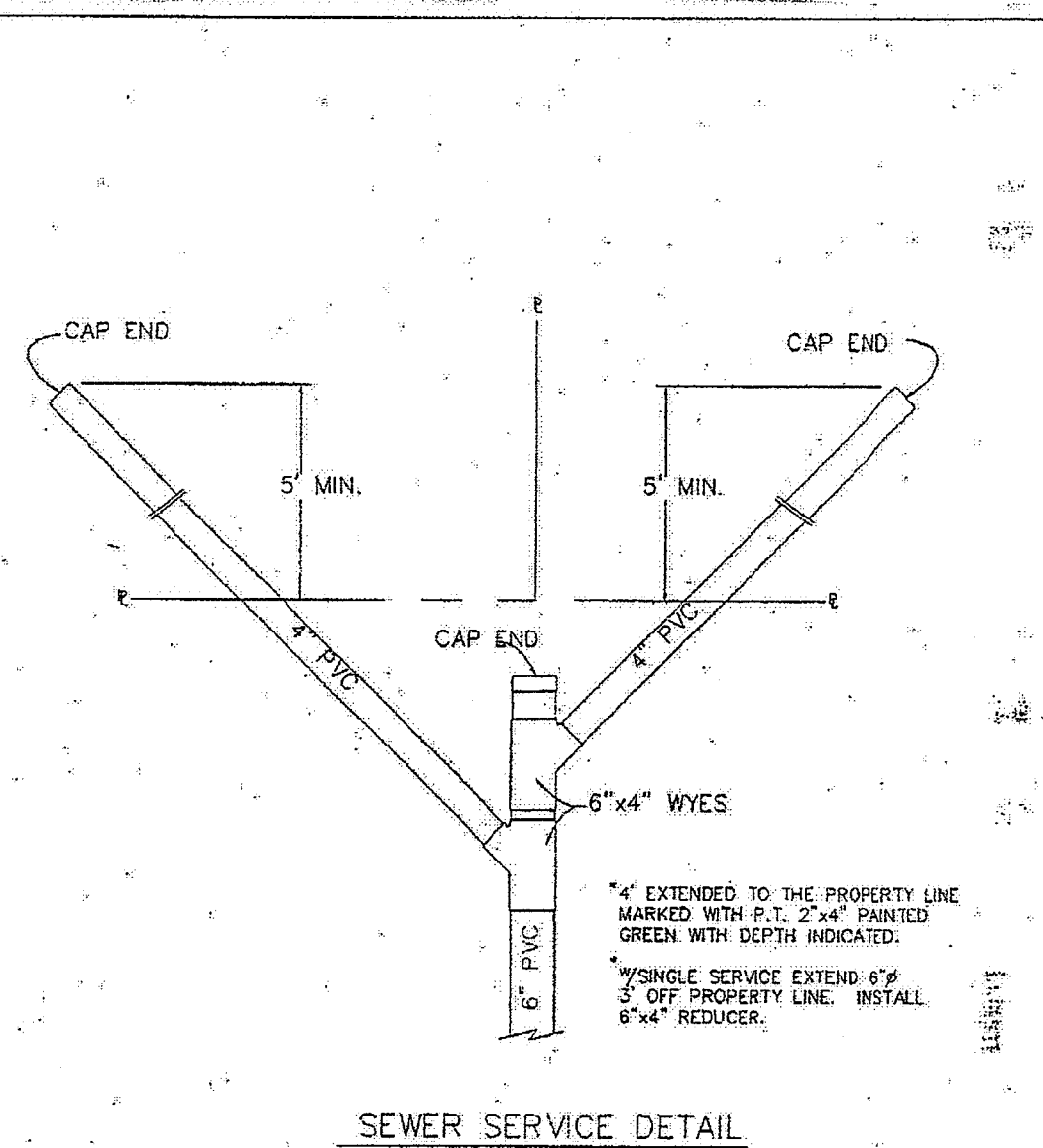
- NOTES FOR DETAIL SS-1:
1. Provide uniform support under barrel.
 2. Hand tamp under haunches.
 3. Compact bedding material to 95% MAX density except directly over pipe, hand tamp only.
 4. See "Excavation and Preparation of Trench" in the Sanitary Sewers section of the Standard Specifications for trench width "W" and trenching options. The pipe zone will be the actual trench width, except for Class A bedding. The minimum concrete width shall be 12" I.D. + 18".
 5. Trench backfill shall conform to "Backfilling Sewer Trenches" in the Sanitary Sewers section of the Standard Specifications, except that rocks or lumps larger than 1" per foot of pipe diameter shall not be used in the backfill material.
 6. See "Bedding Material for Flexible Pipe" in the Aggregates section of the Standard Specifications for the material specifications.
 7. Pipe must be anchored in such a manner as to ensure flow line is maintained.



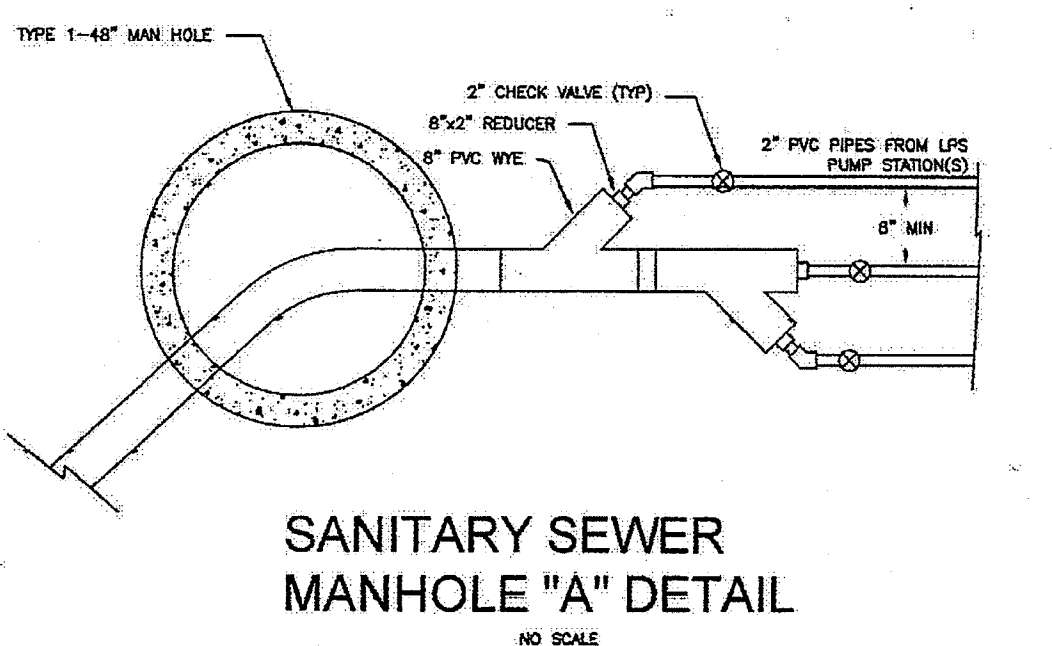
APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-10
Public Works Director Date INSIDE DROP STRUCTURE



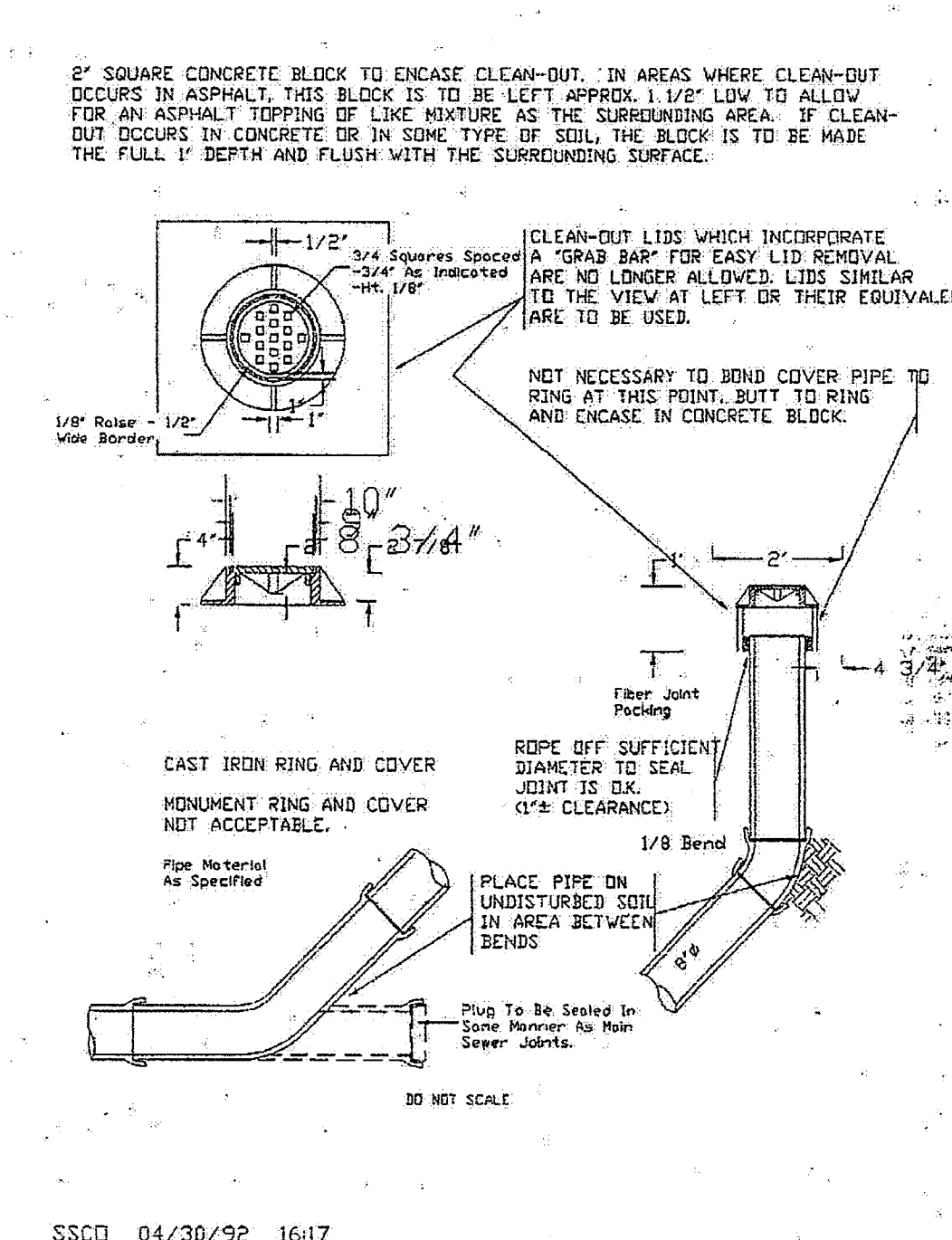
APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-2
Public Works Director Date TYPE 1 48" MANHOLE



APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-13
Public Works Director Date DOUBLE SANITARY SEWER SERVICE



SANITARY SEWER MANHOLE "A" DETAIL
NO SCALE



APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-5
Public Works Director Date 8" CLEAN OUT

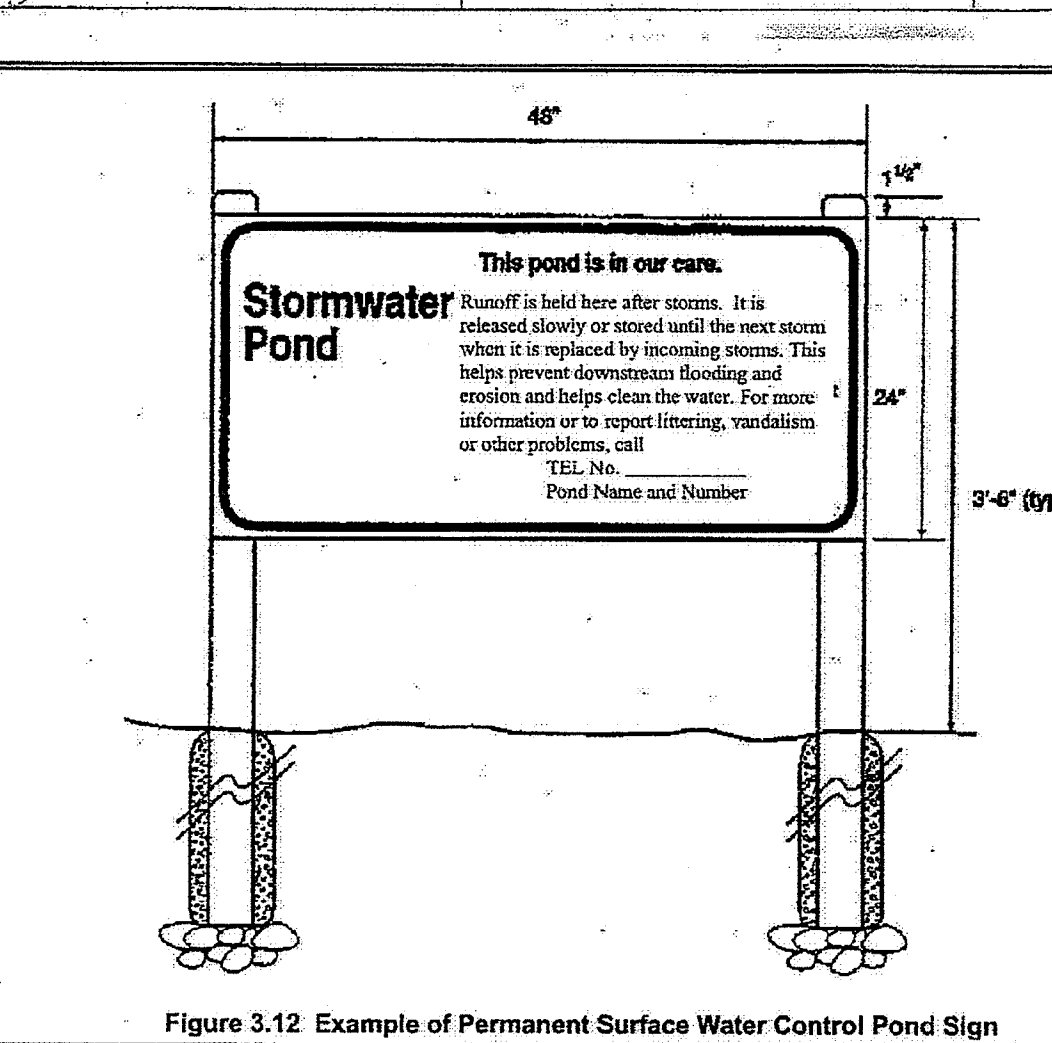


Figure 3.12 Example of Permanent Surface Water Control Pond Sign

Sample Specifications:

Size: 48 inches by 24 inches

Material: 0.125-gauge aluminum

Face: Non-reflective vinyl or 3 coats outdoor enamel (sprayed).

Lettering: Silk screen enamel where possible, or vinyl letters.

Colors: Beige background, teal letters.

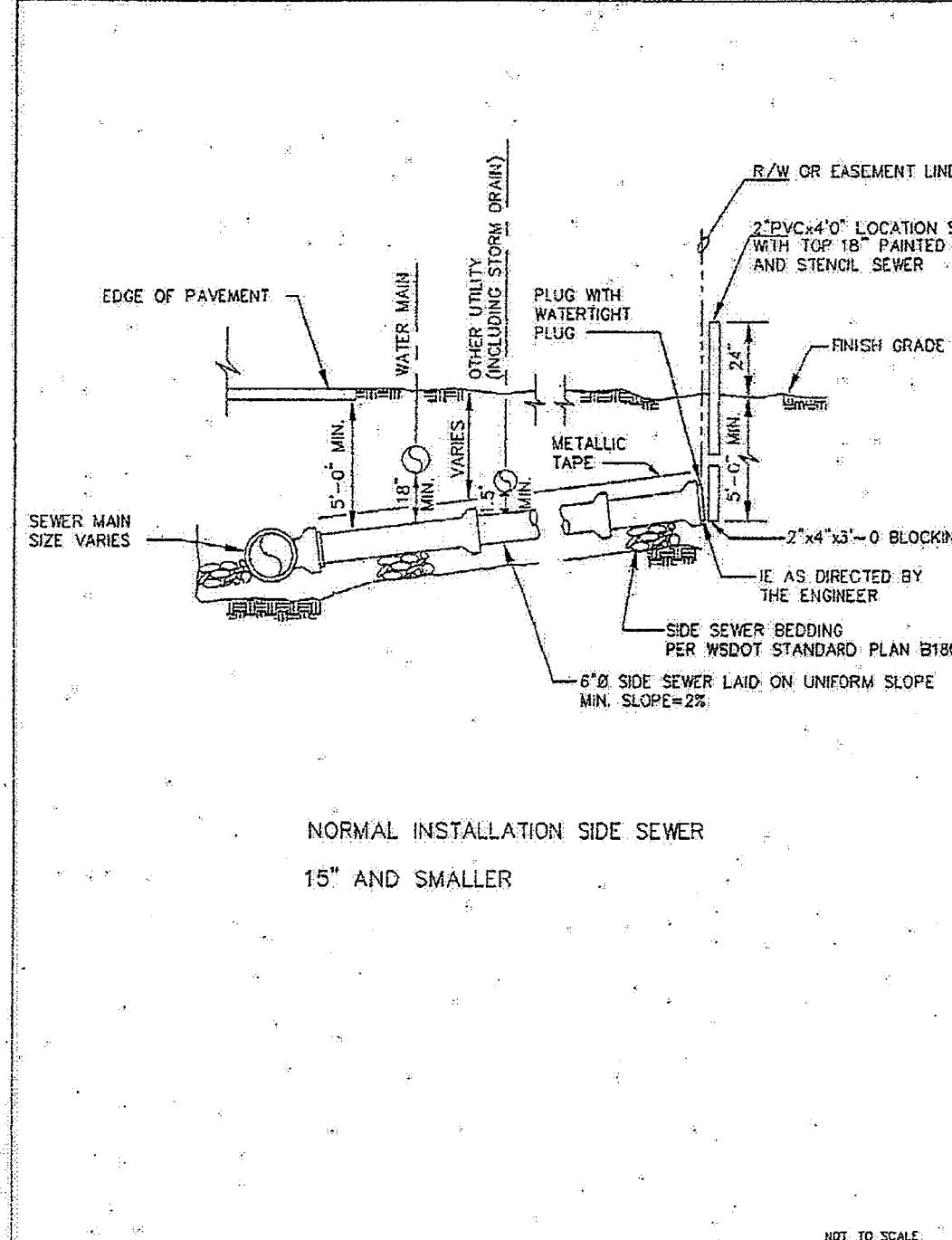
Type face: Helvetica condensed. Title: 3 inch; Sub-Title: 1 1/2 inch; Text: 1 inch; Outer: 1/8 inch border distance from edge: 1/4 inch; all text 1 1/2 inch from border.

Posts: Pressure treated, beveled tops, 1 1/2 inch higher than sign.

Installation: Secure to chain link fence if available. Otherwise install on two 4"x4" posts, pressure treated, mounted stop gravel bed, installed in 30-inch concrete filled post holes (8-inch minimum diameter). Top of sign no higher than 42 inches from ground surface.

Placement: Face sign in direction of primary visual or physical access. Do not block any access road. Do not place within 6 feet of structural facilities (e.g. manholes, spillways, pipe inlets).

Special Notes: This facility is lined to protect groundwater (if a liner that restricts infiltration of stormwater exists).



APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-6
Public Works Director Date 15" AND SMALLER SEWER MAINS

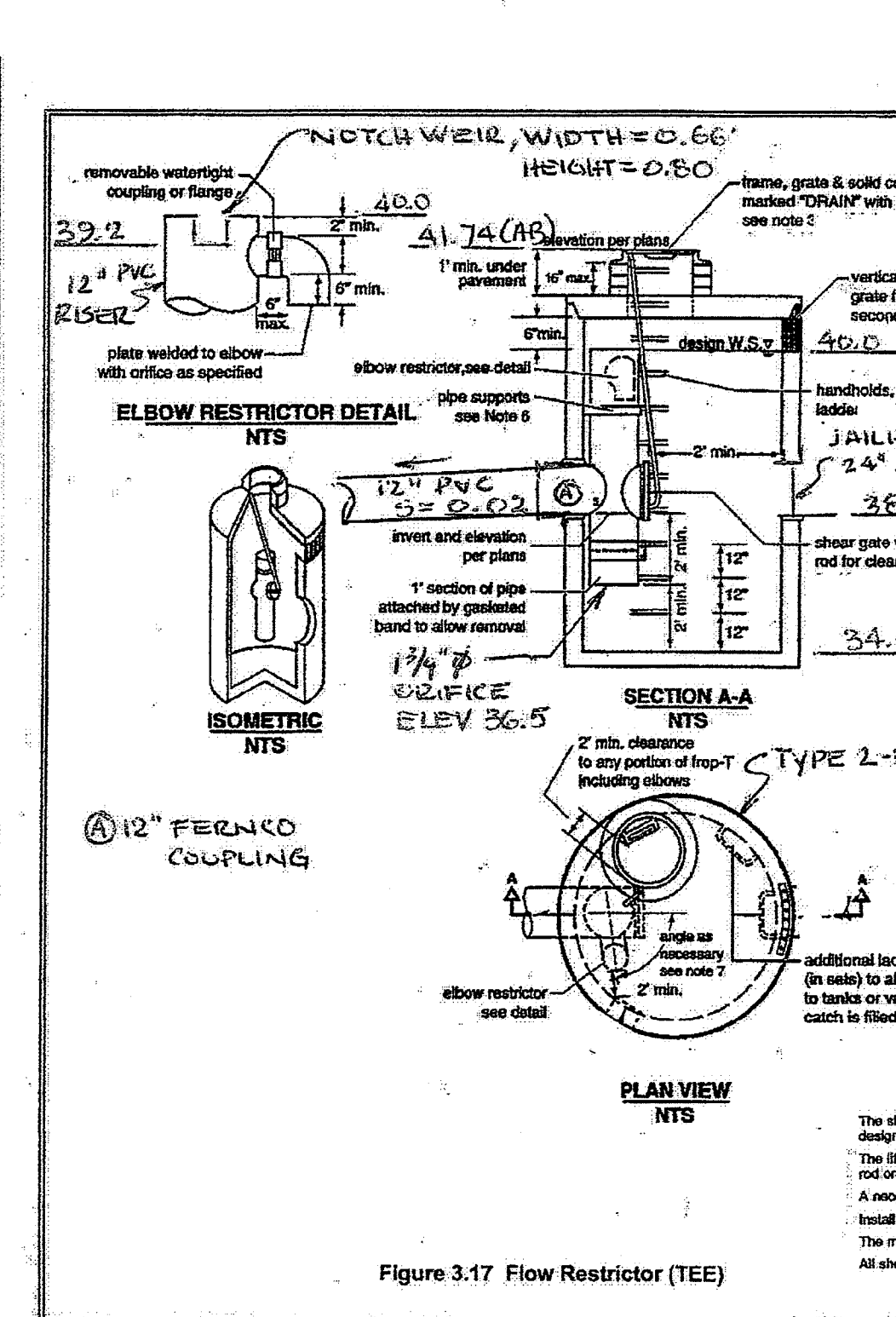
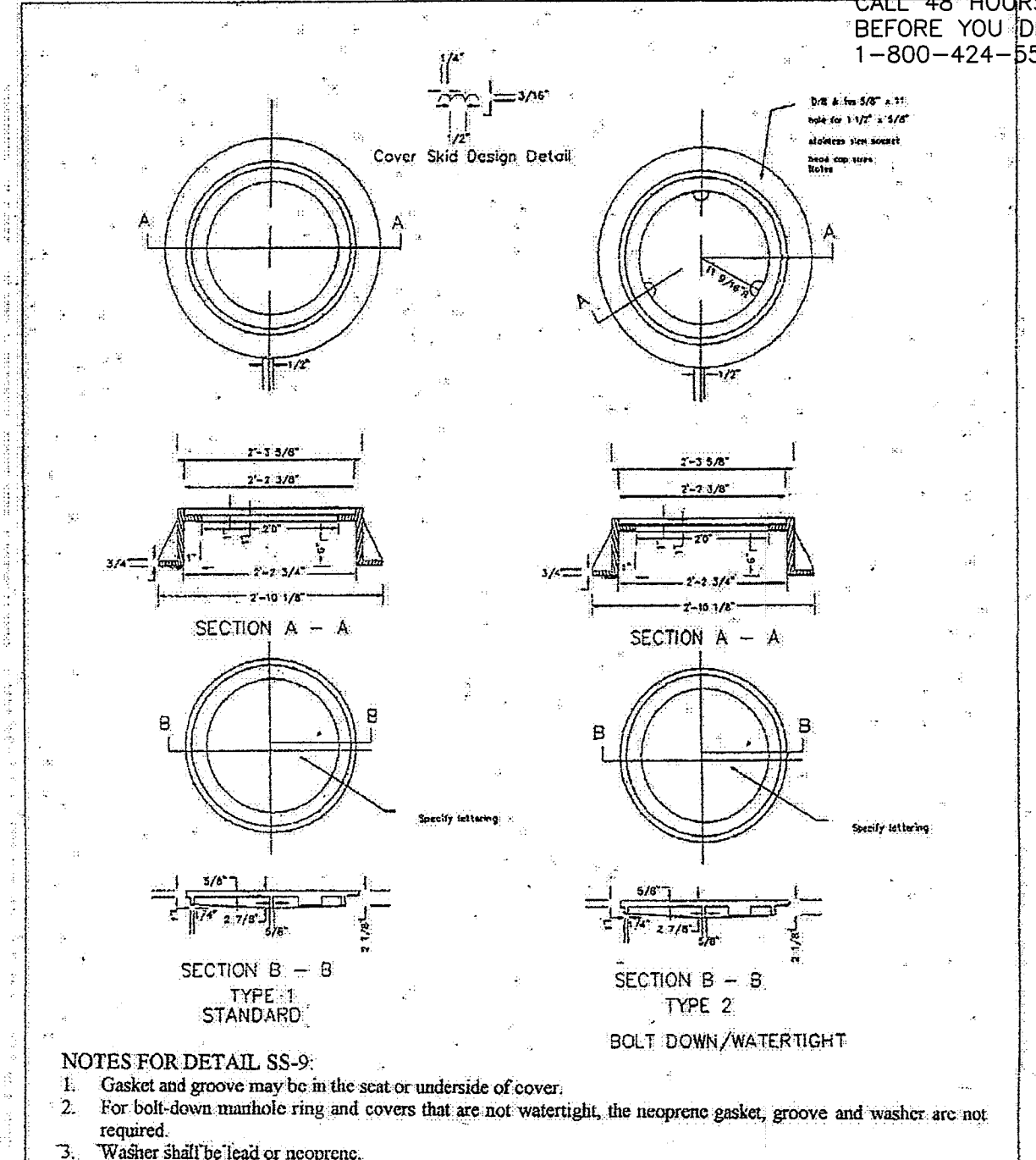


Figure 3.17 Flow Restrictor (TEE)

NOTES FOR CONTROL STRUCTURE SDMH#1 DETAIL:

1. Use a minimum of 54" diameter Type 2 catch basin.
2. Outlet Capacity: 100 Year developed peak flow.
3. Metal Parts: Corrosion resistant. Non-galvanized parts to have asphalt treatment.
4. Frame and Ladder or steps offset so:
 - A. Cleanout gate is visible from top.
 - B. Climb-down space is clear of riser and cleanout gate.
 - C. Frame is clear of curb.
5. If metal outlet pipe connects to cement concrete pipe: outlet pipe to have smooth O.D. equal to concrete I.D. less 1/2".
6. Provide at least one 3" x 100" support bracket anchored to concrete wall. Maximum 3' 0" spacing.
7. Locate elbow restrictor(s) as necessary to provide minimum clearance as shown.
8. Locate additional ladder rungs in structures used as access to tanks or vaults to allow access when catch basin is filled with water.



APPROVED: *[Signature]* CITY OF FERDALE DRAWING: SS-9
Public Works Director Date MANHOLE RING & COVER

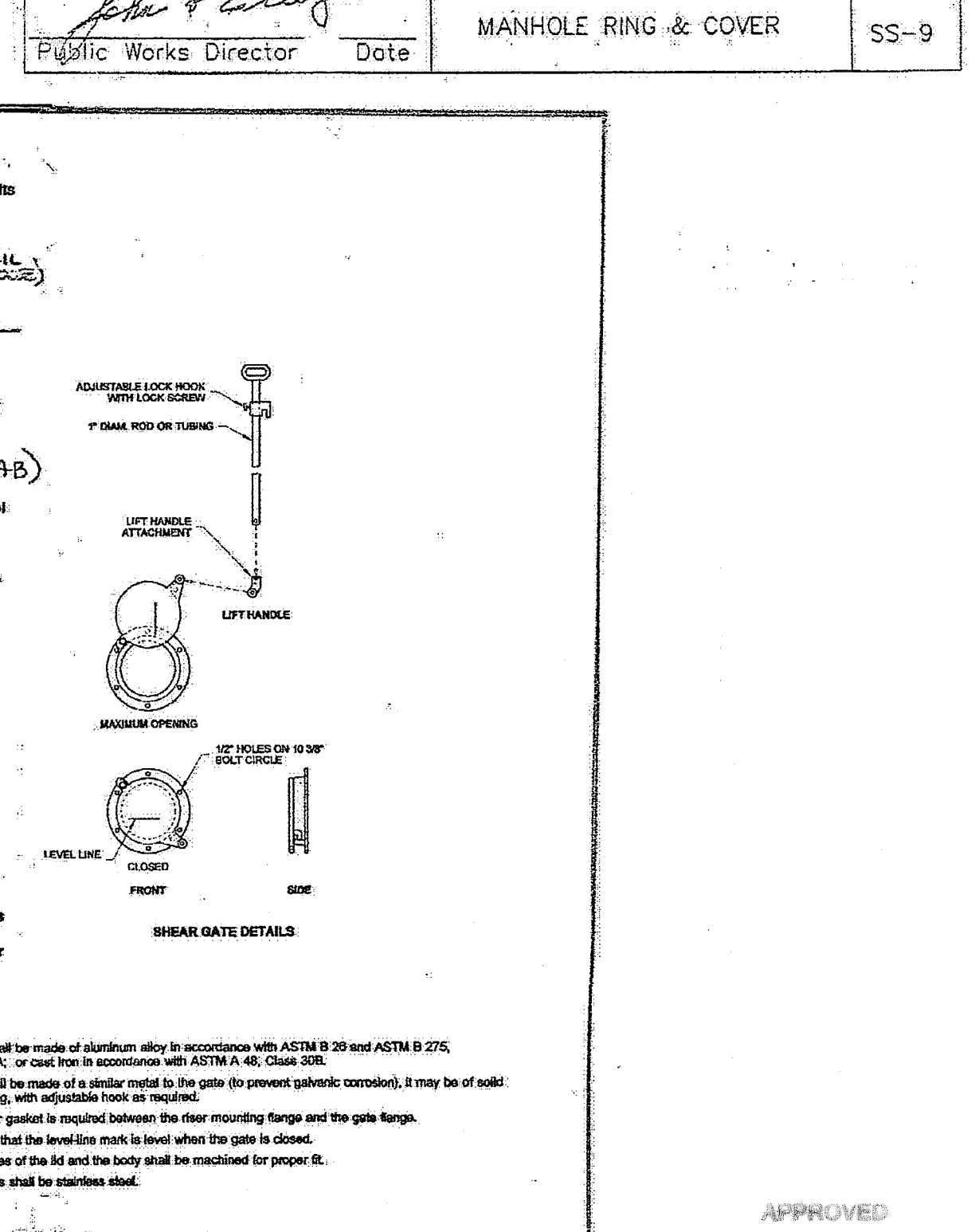


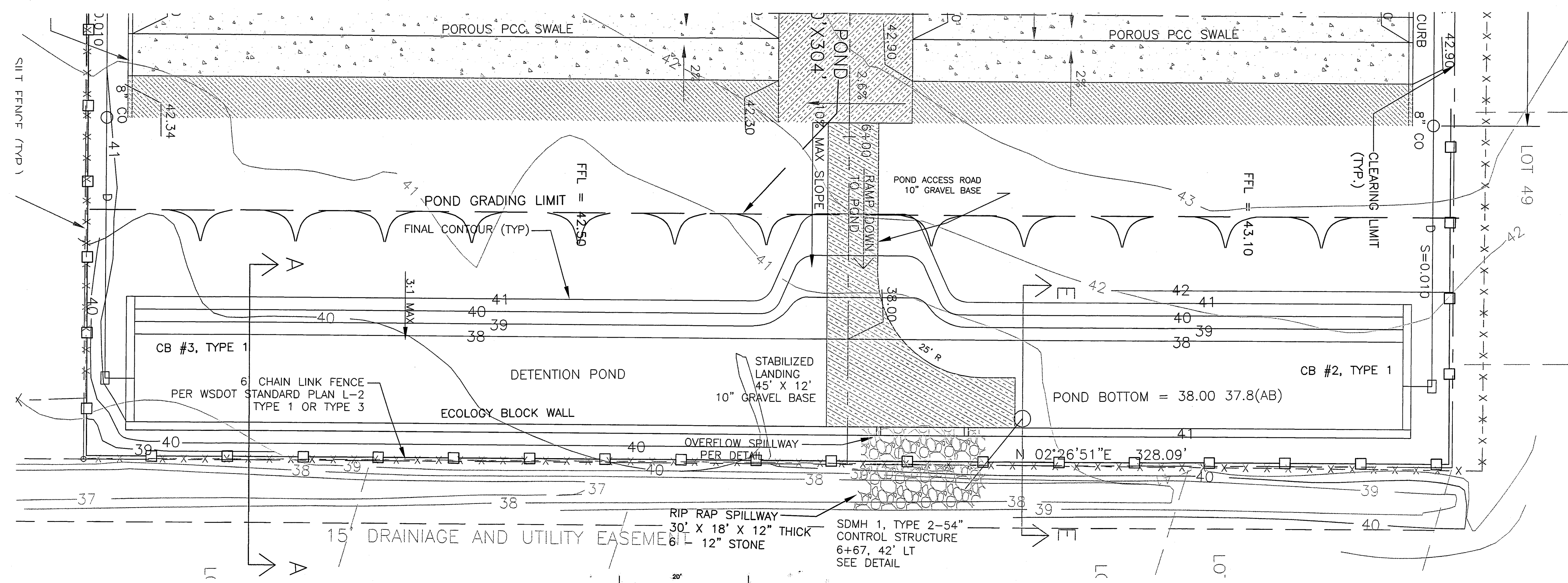
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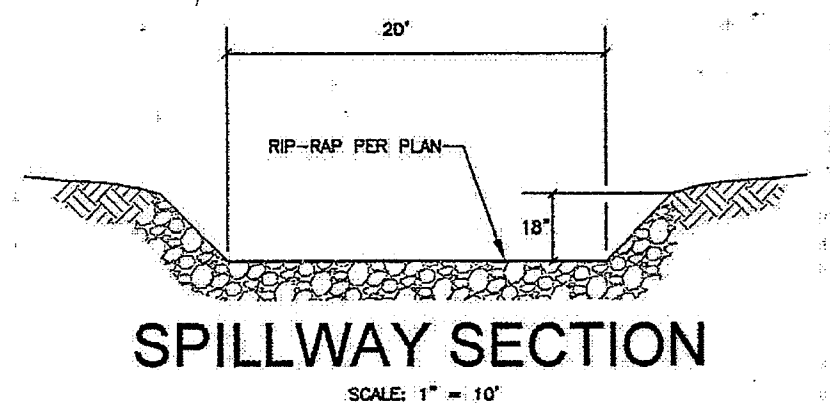
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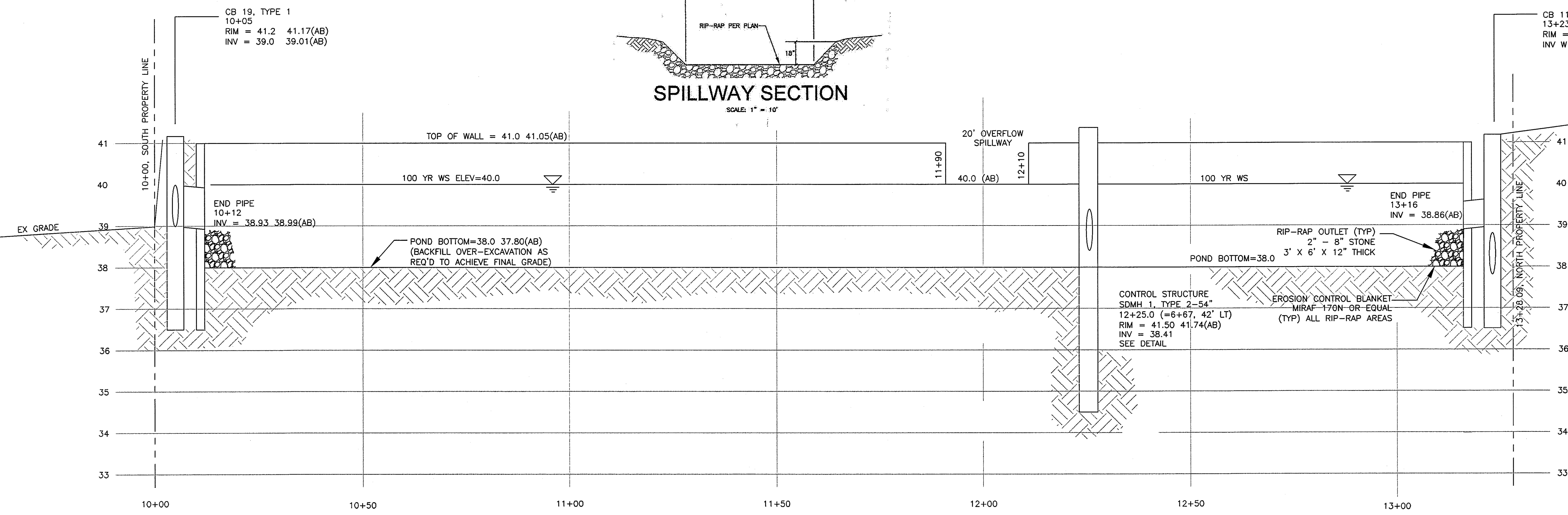
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1-800-424-5555

NORTH
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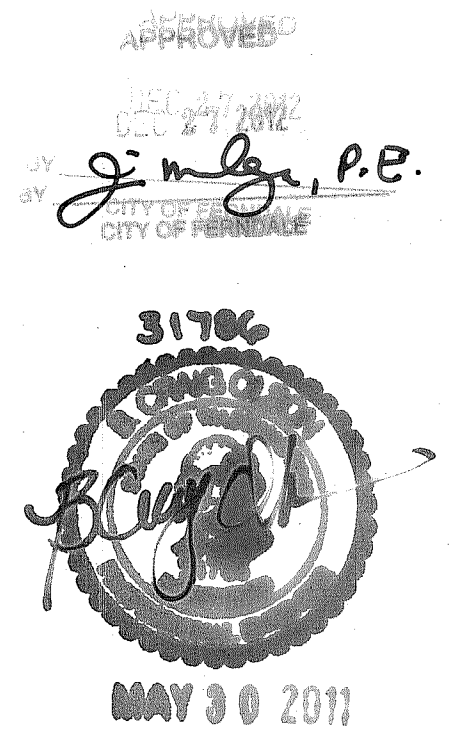
DETENTION POND,
SCALE: 1" = 15'



POND SECTION
HORIZONTAL SCALE: 1" = 15'
VERTICAL SCALE: 1" = 1.5'



SECTION E-E
SCALE: 1" = 4'



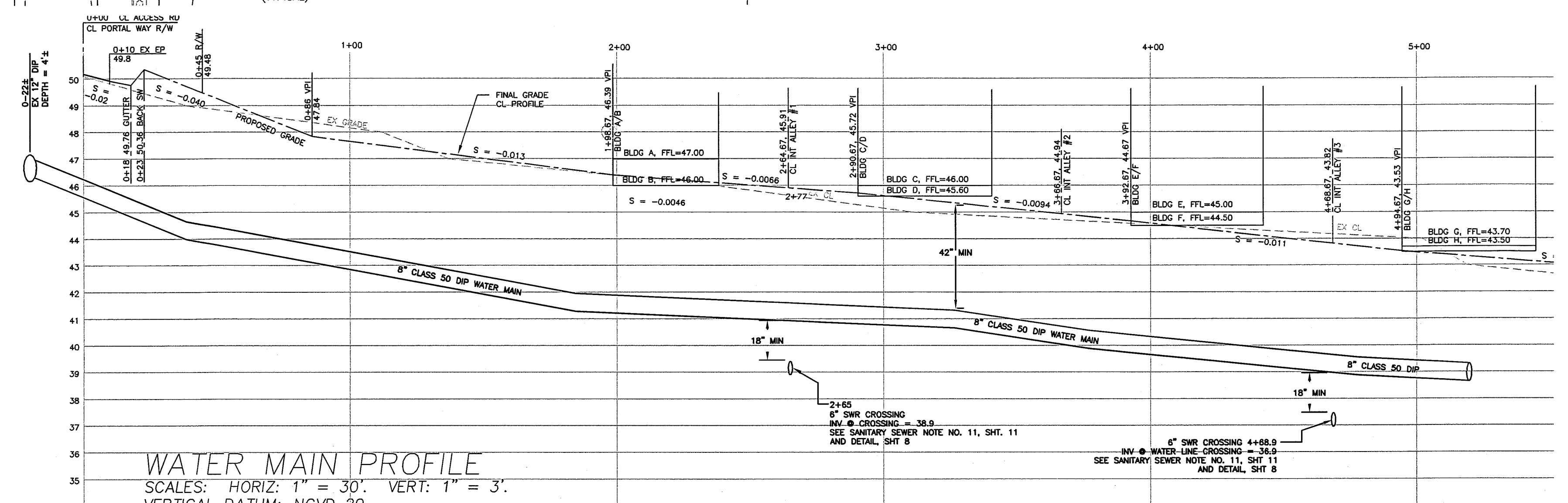
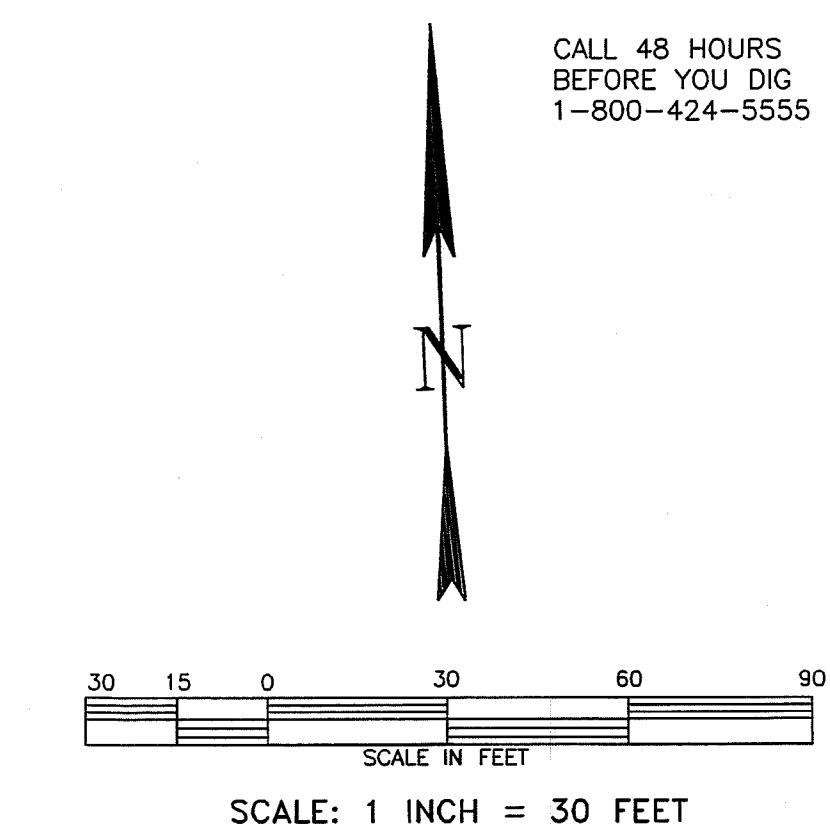
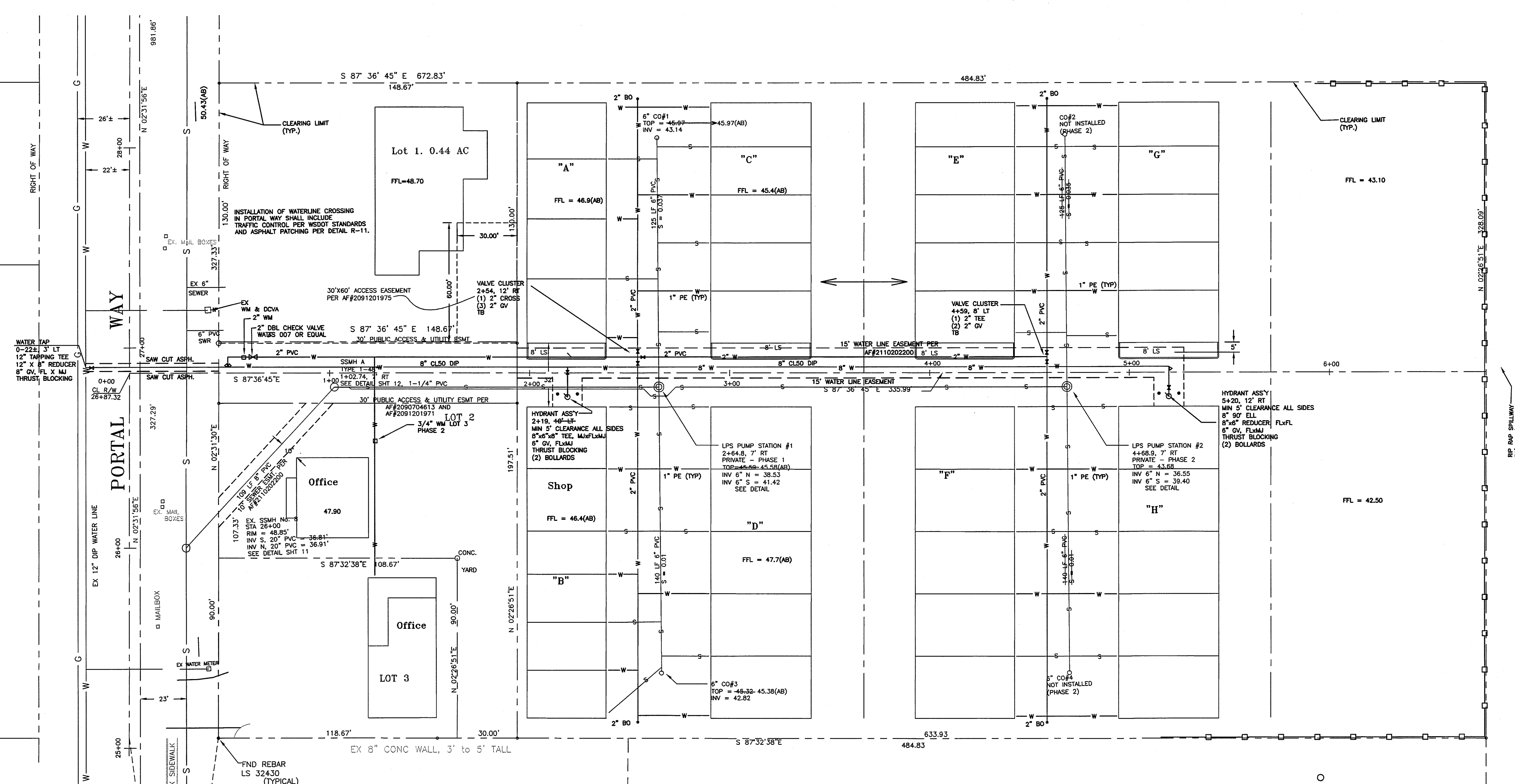
AS-BUILT

STORMWATER POND
PLAN & DETAILS

Pioneer Post Frame, Inc.
DWS Office and Storage
6190 Portal Way Ferndale, WA 98248
SEC 17, T 39 N, R 2 E, W.M.

Craig Olson, P.E.
1040 Piedmont Place
Bellingham, WA 98229
360.510.0480

SHEET:
6
OF 12



APPROVED
DEC 27 2012
BY *J. M. G.* P.E.
CITY OF FERDALE

31786
FORD
MAY 30 2011

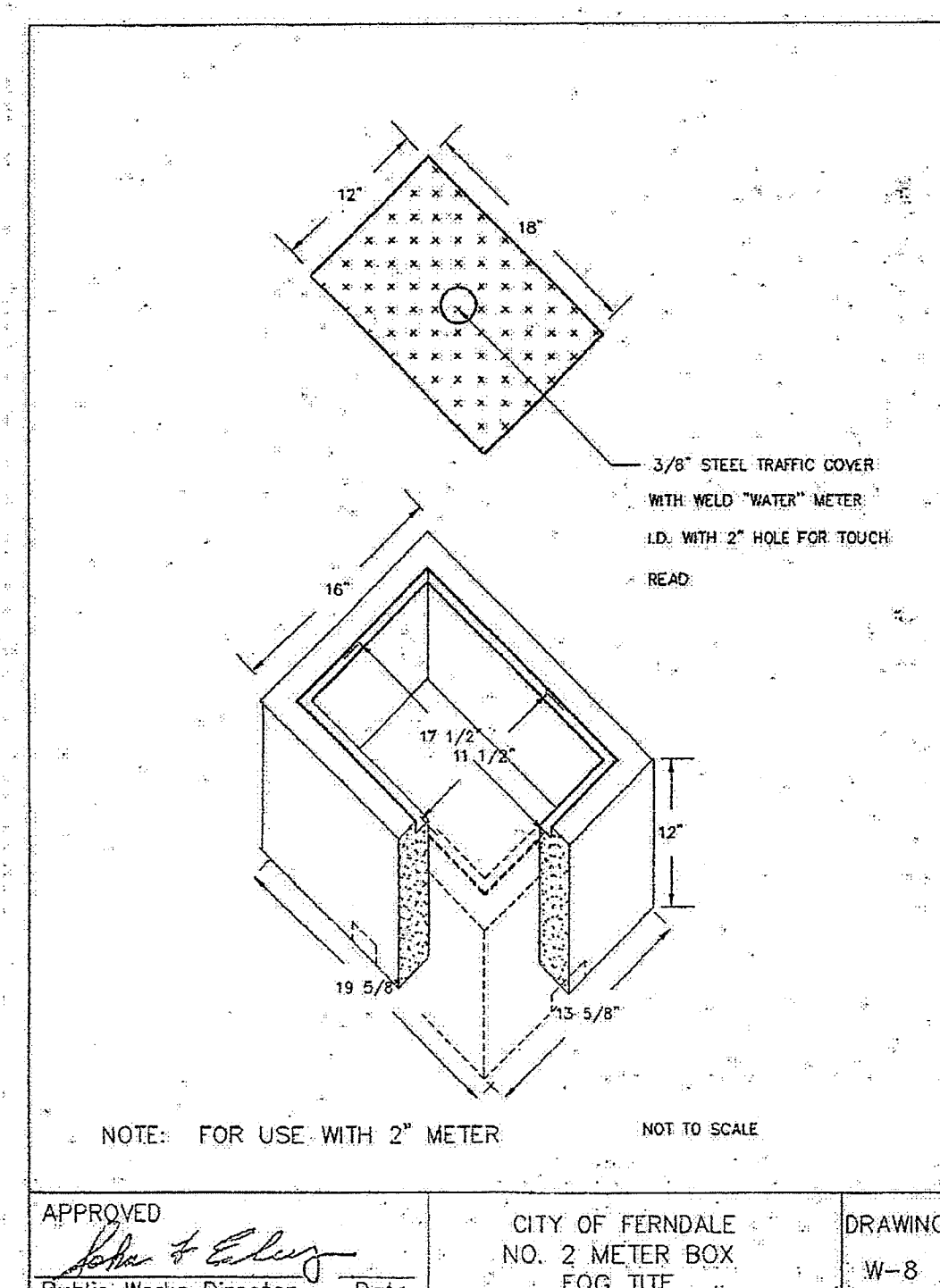
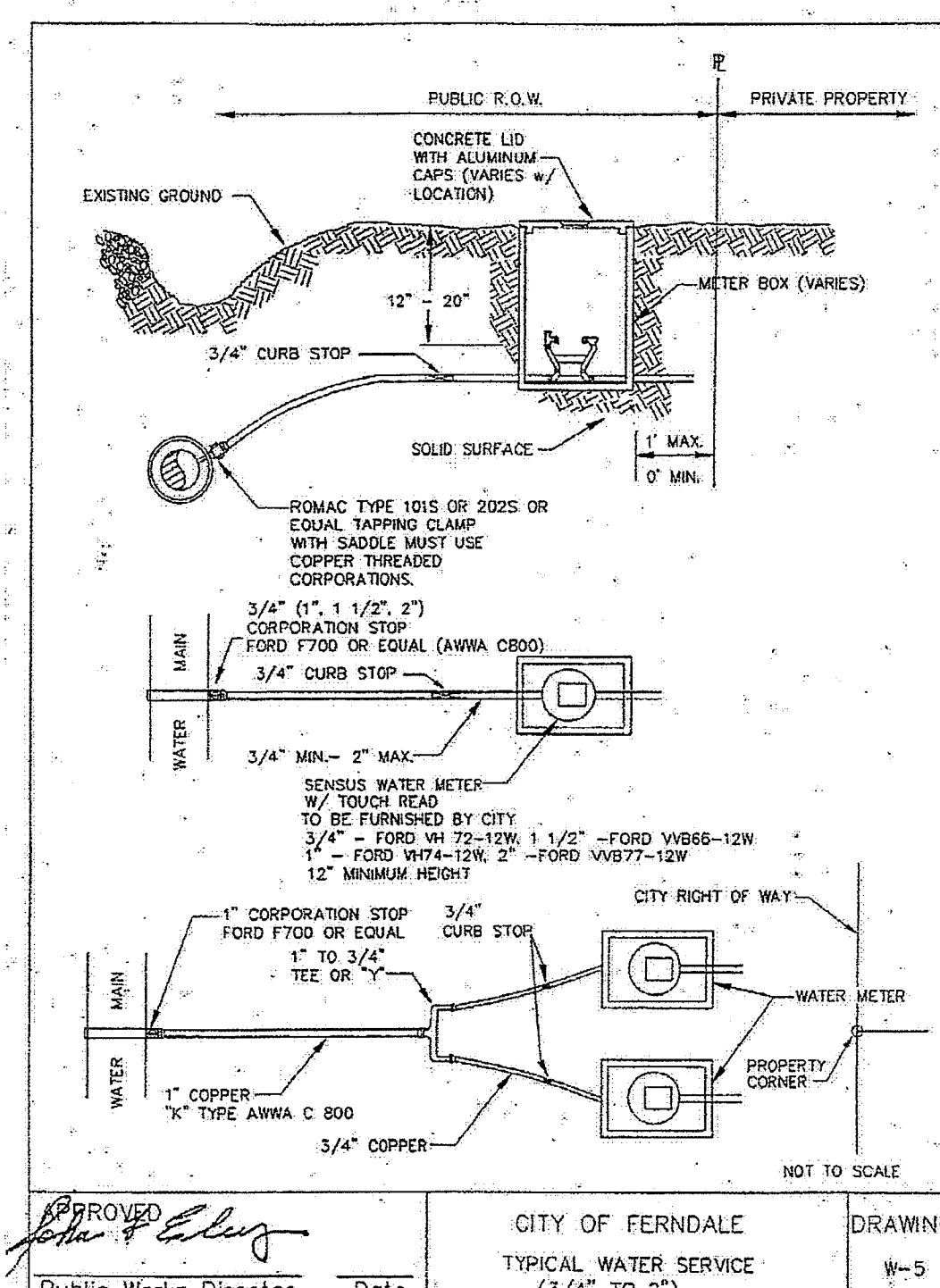
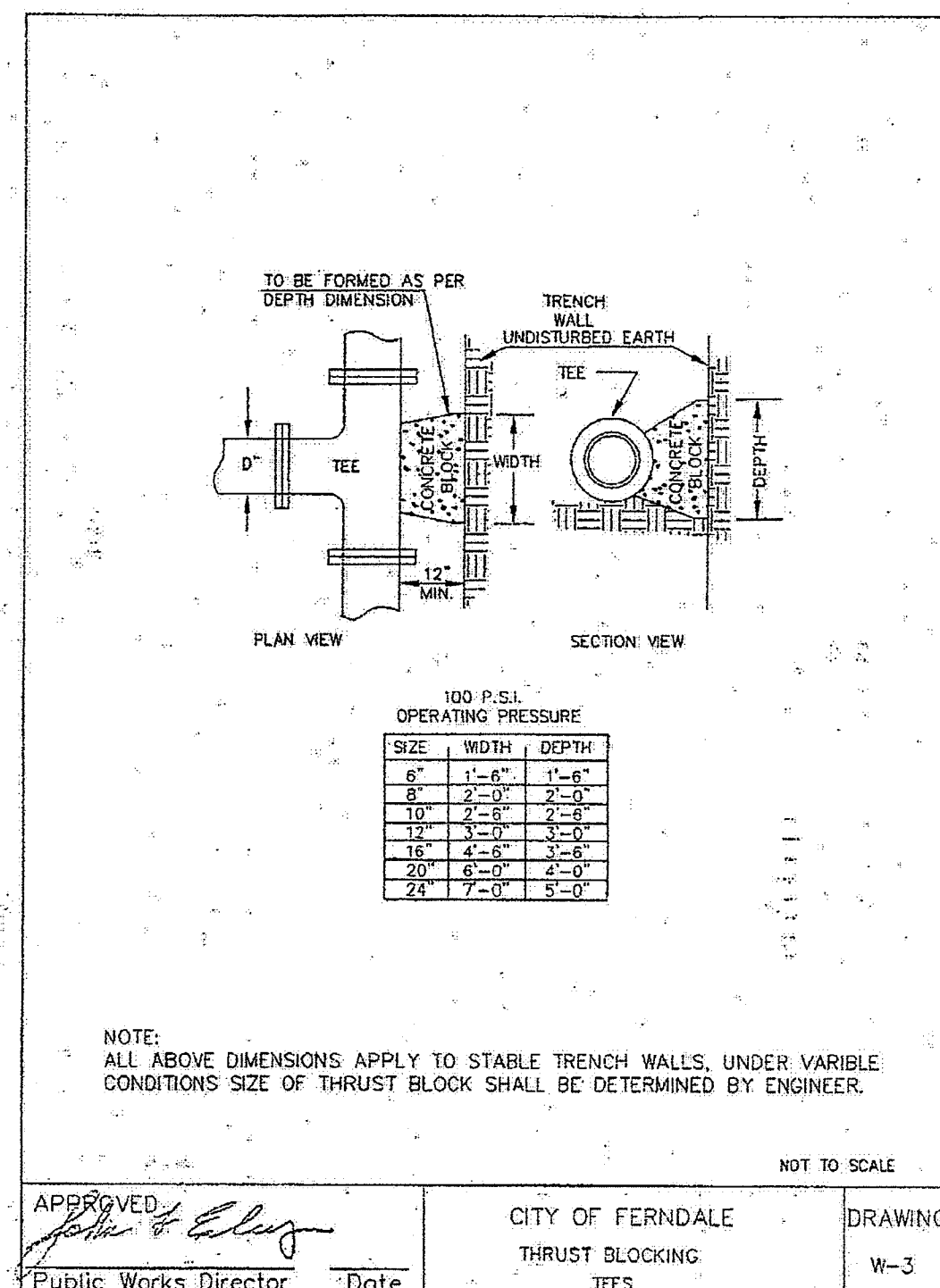
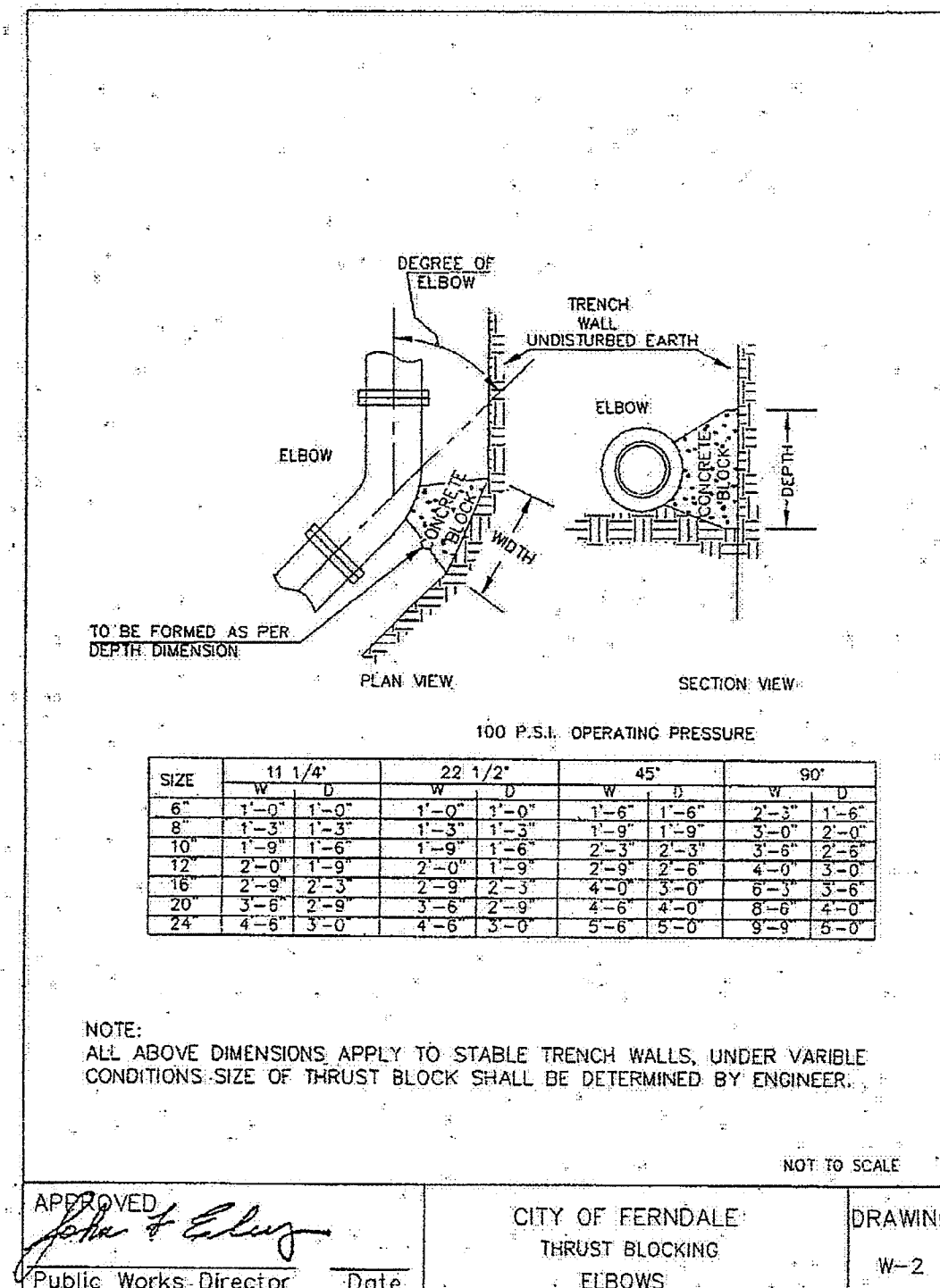
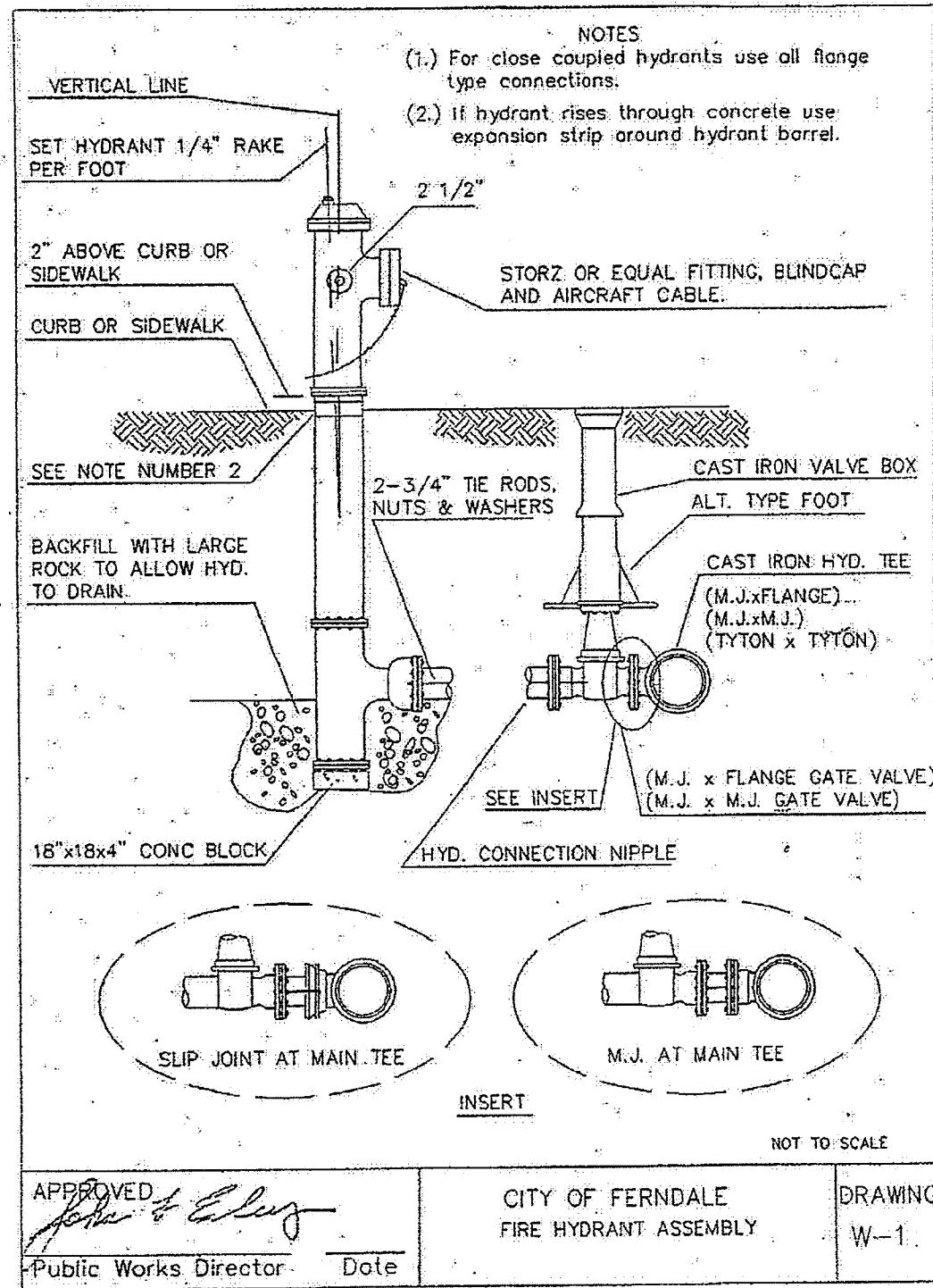
AS-BUILT

WATER SYSTEM PLAN & PROFILE			
REVISION	DATE	DESCRIPTION	REVISED PER CITY RED-LINES
1	5/26/11	AS-BUILT	
	11/5/10		

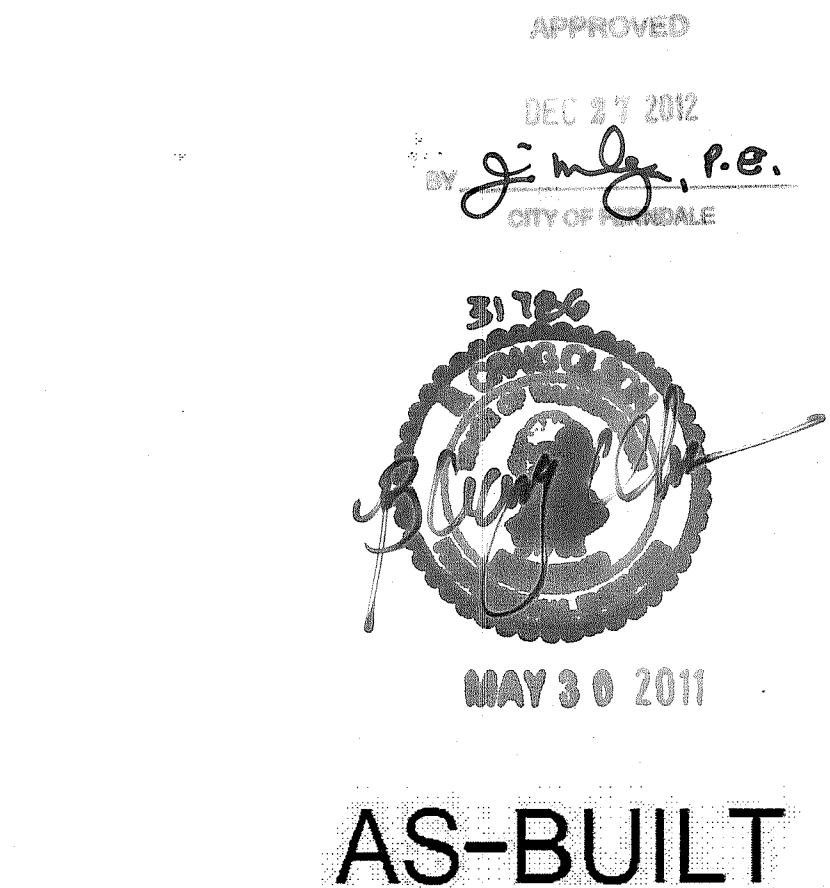
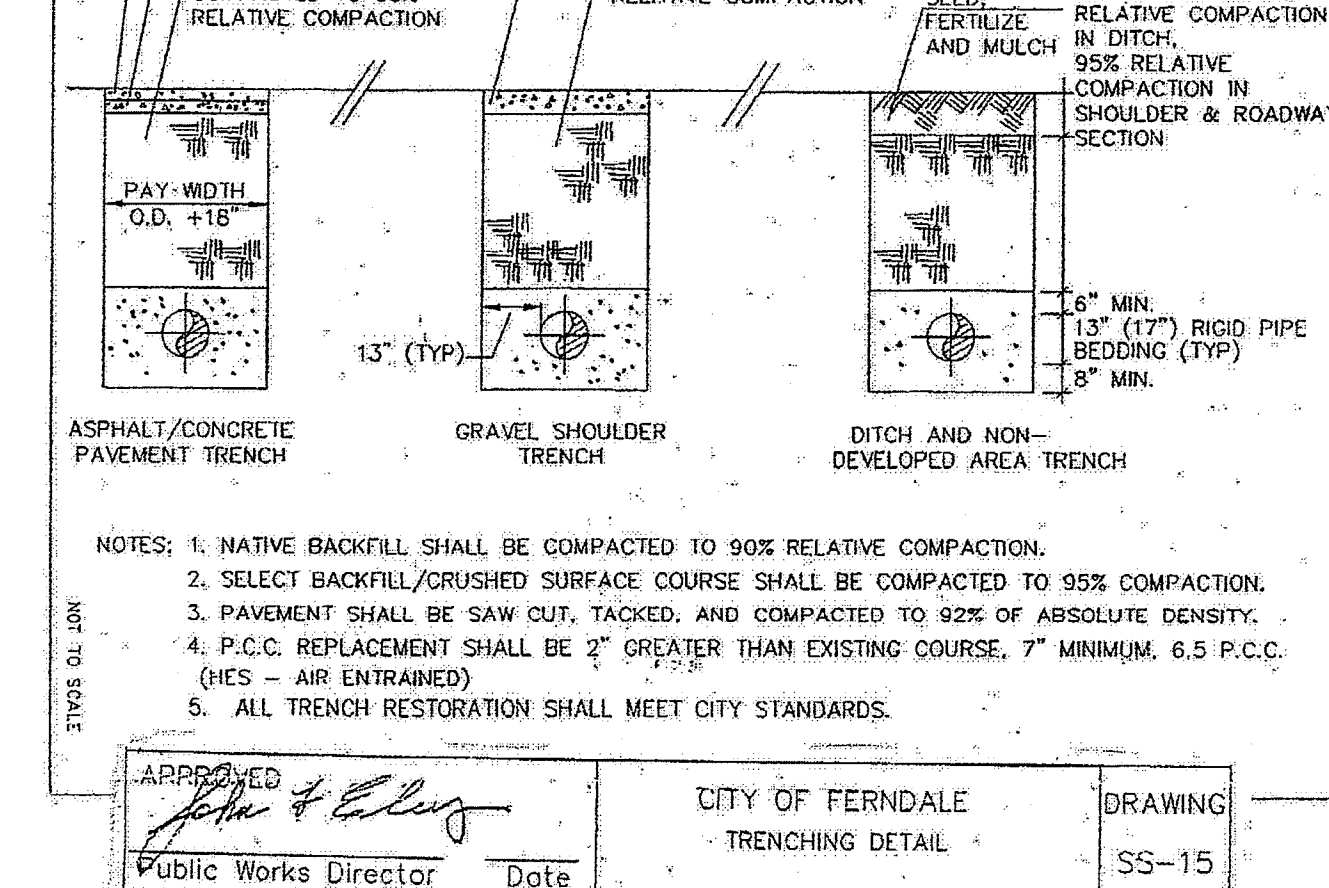
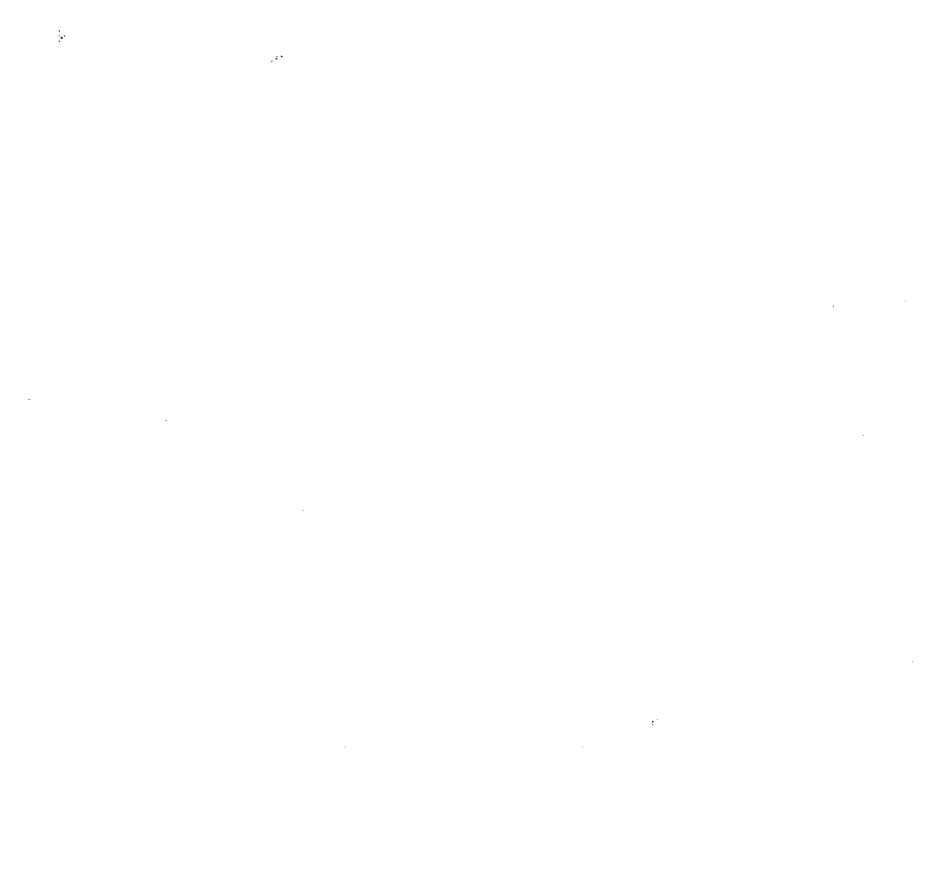
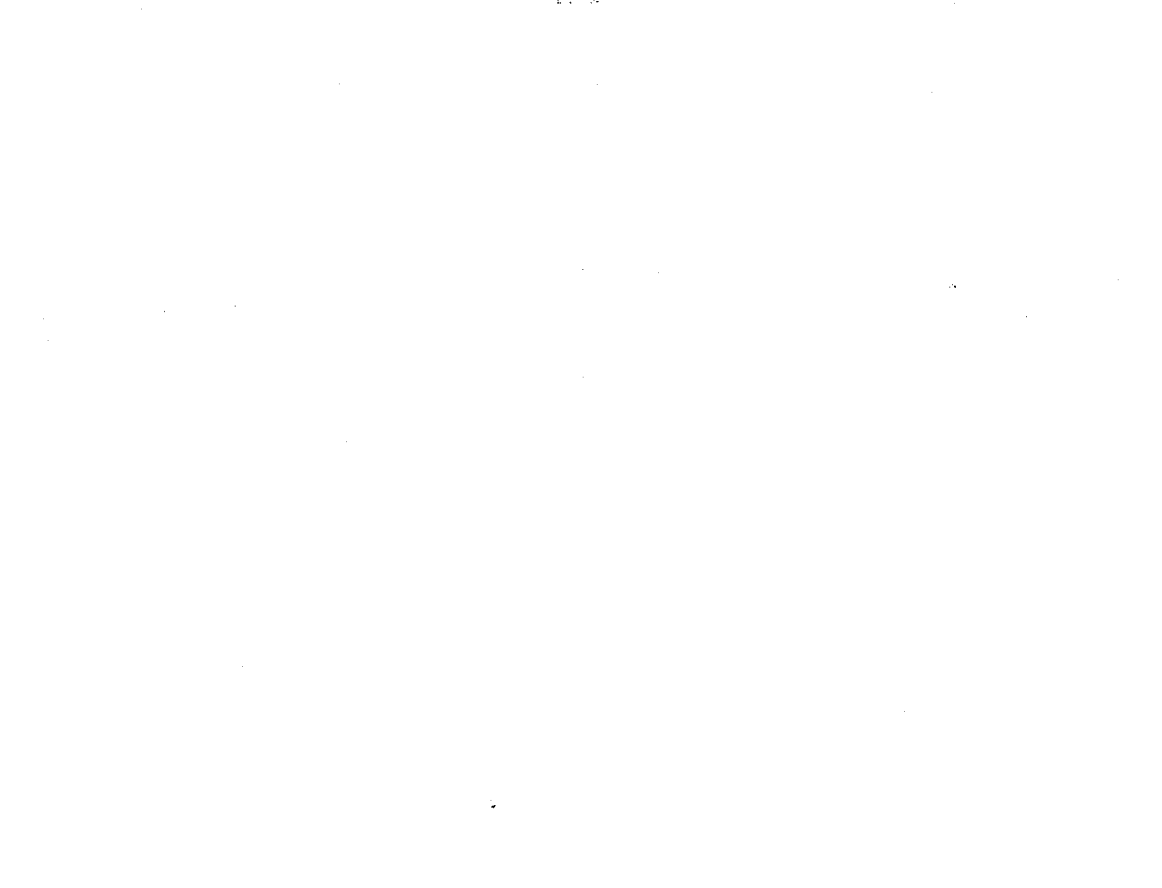
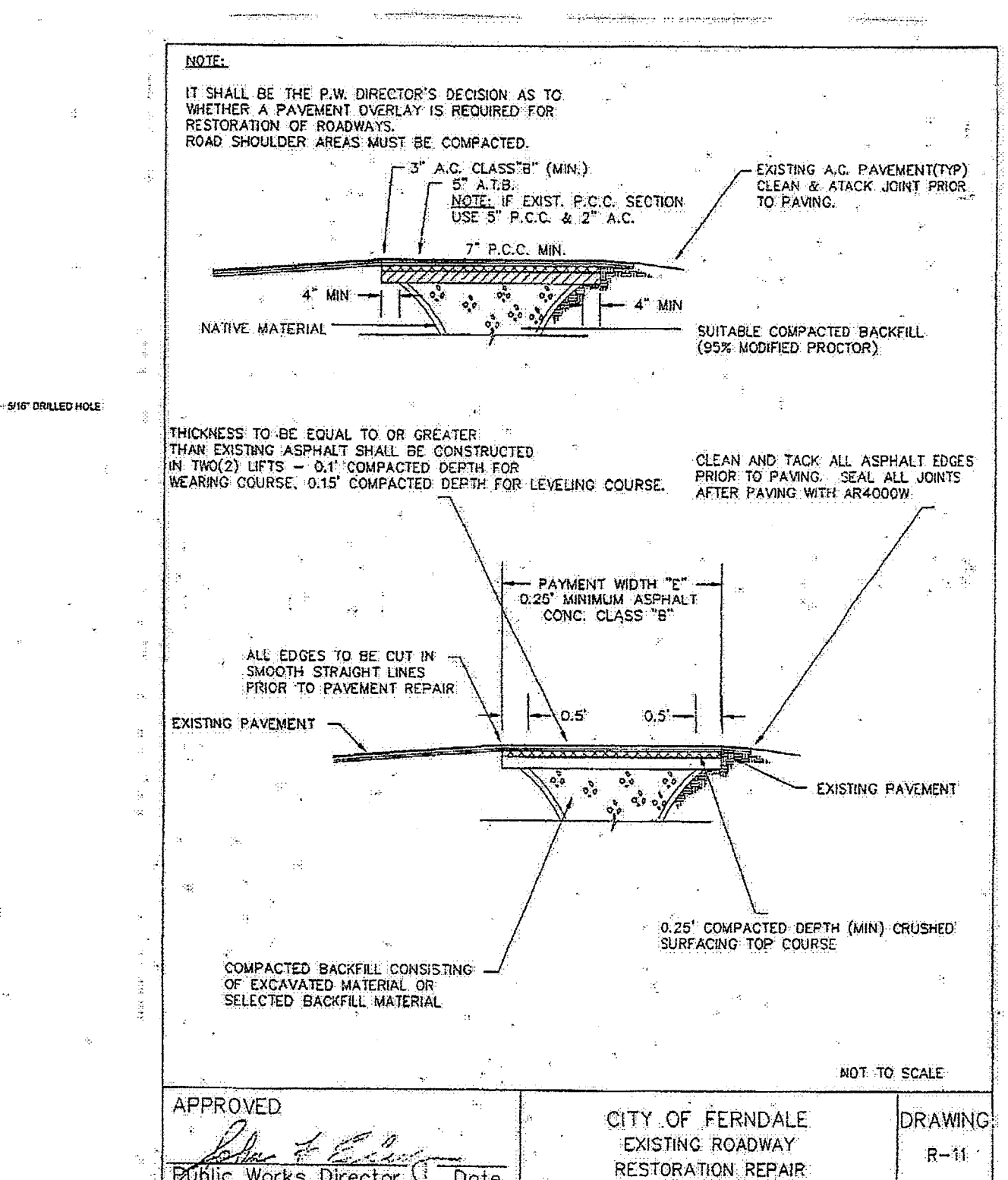
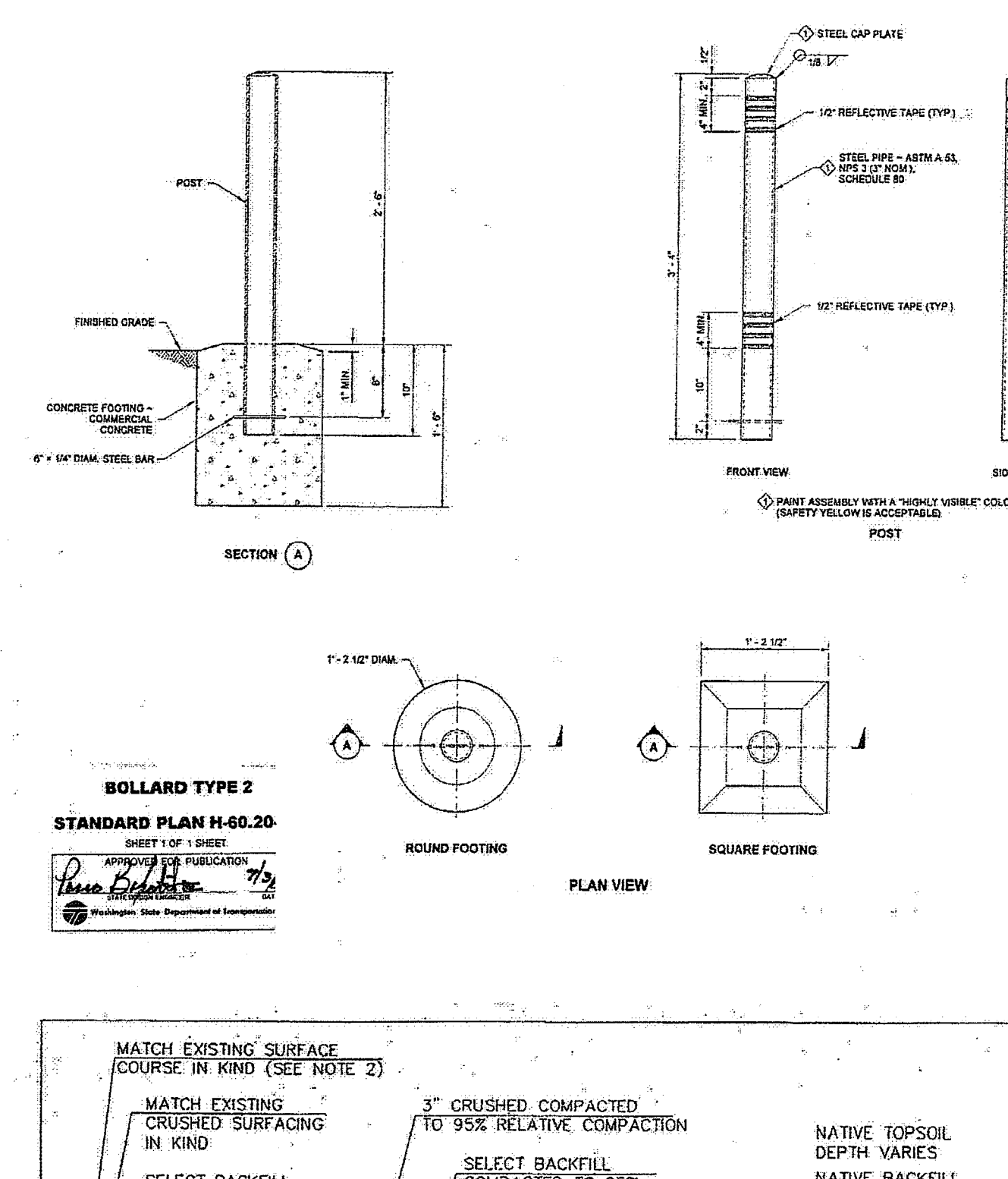
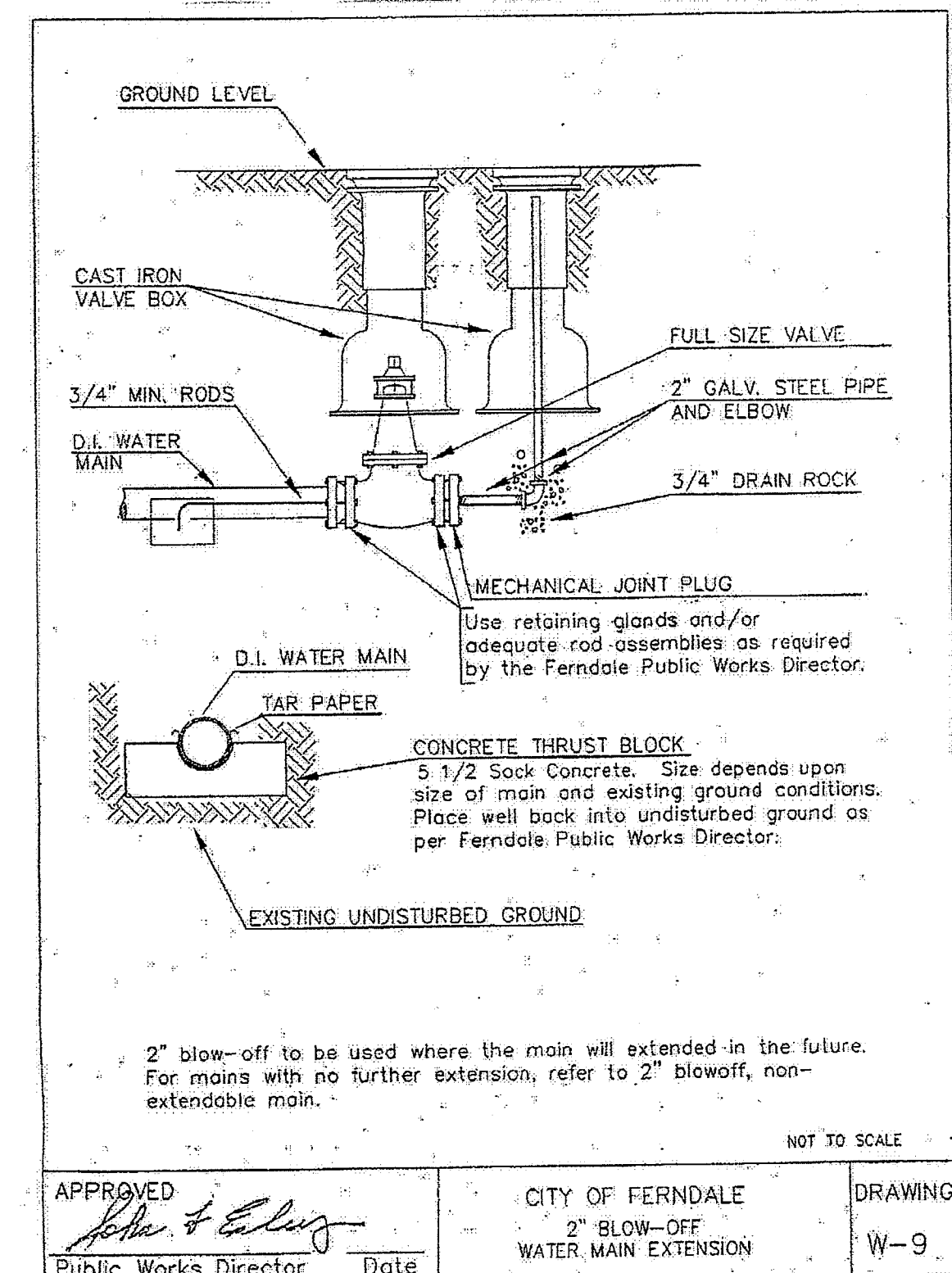
Pioneer Post Frame, Inc.
DWS Office and Storage
6190 Portal Way, Ferndale, WA 98248
SEC 17, T 39 N, R 2 E, W.M.

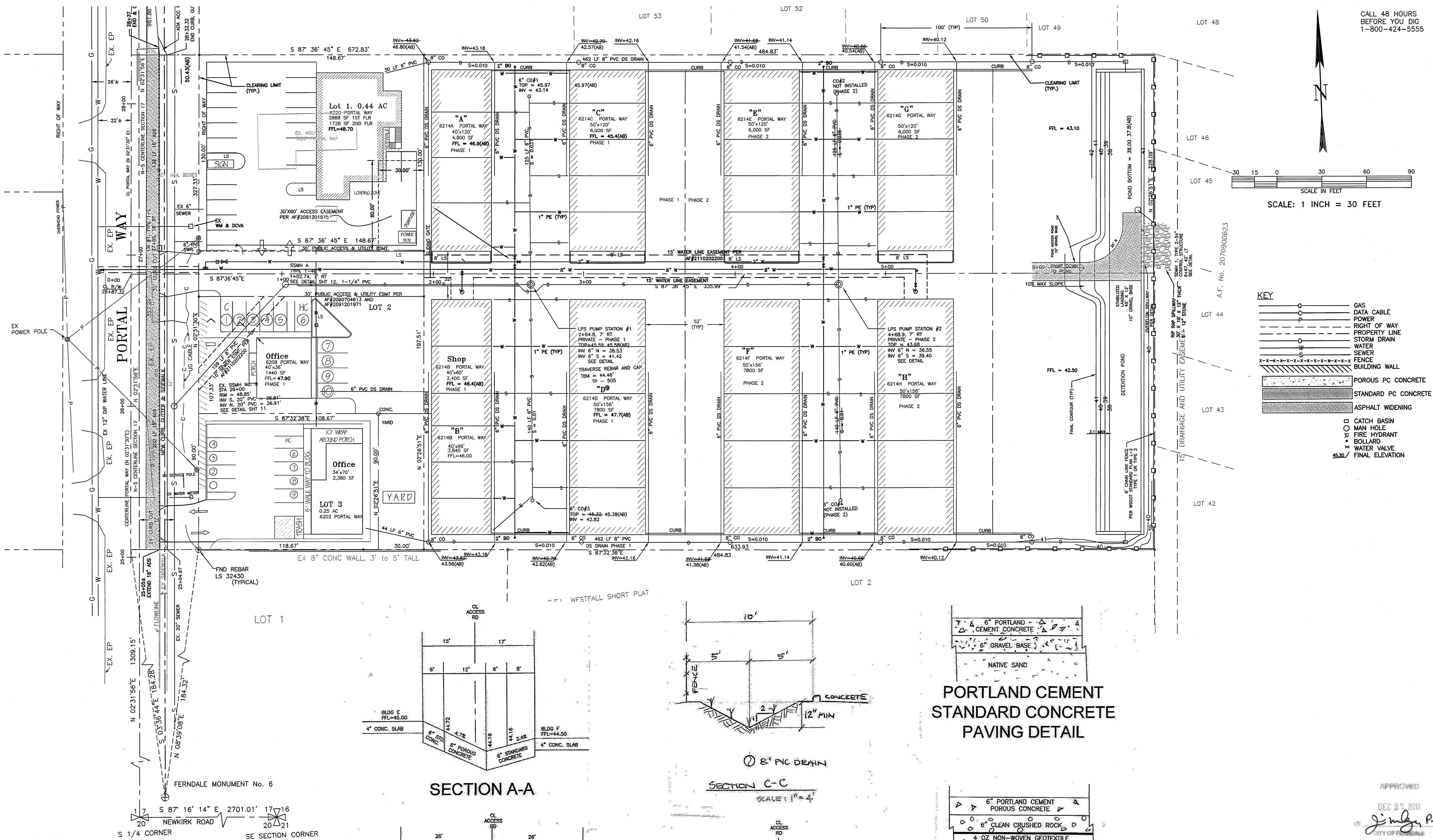
Craig Olson, P.E.
1040 Piedmont Place
Bellingham, WA 98229
360.510.0480

OF: 12



CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555



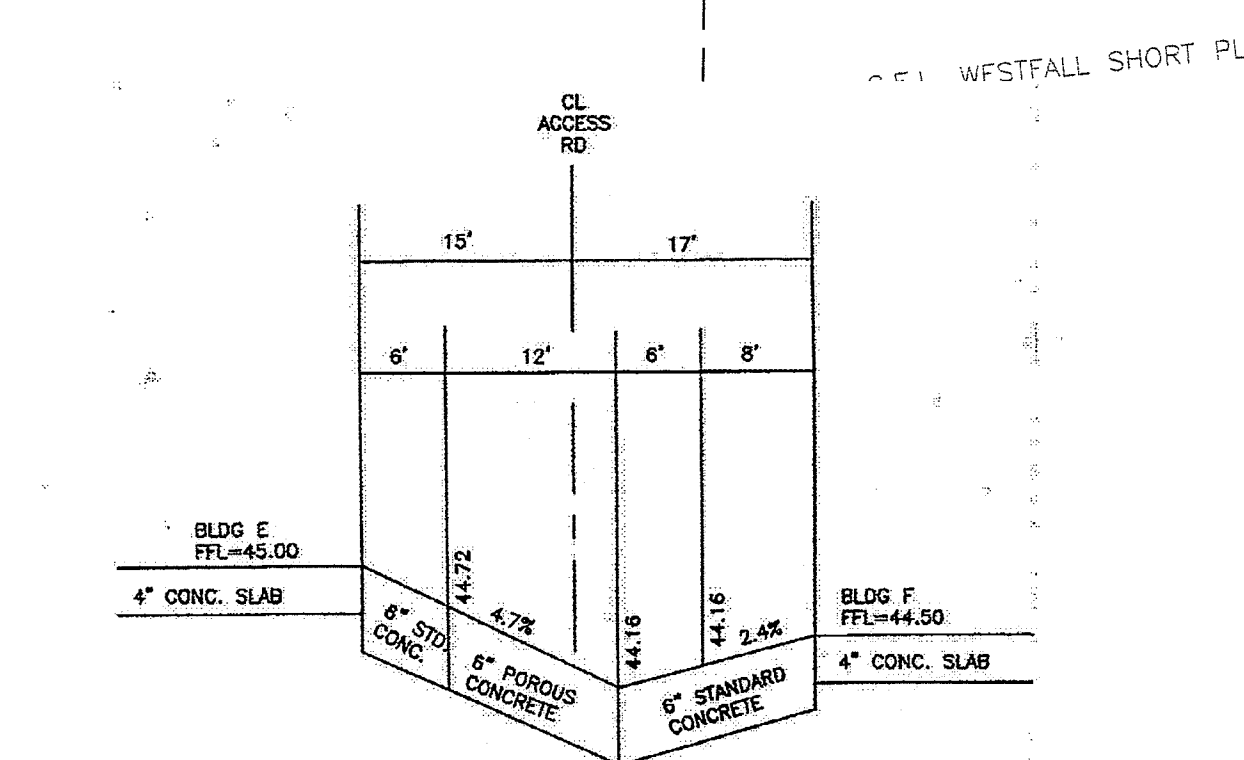


- KEY**
- GAS
 - DATA CABLE
 - POWER
 - RIGHT OF WAY
 - PROPERTY LINE
 - STORM DRAIN
 - WATER
 - SEWER
 - FENCE
 - BUILDING WALL
 - POROUS PC CONCRETE
 - STANDARD PC CONCRETE
 - ASPHALT WIDENING
 - CATCH BASIN
 - MAN HOLE
 - FIRE HYDRANT
 - BOLLARD
 - WATER VALVE
 - 48.20' FINAL ELEVATION

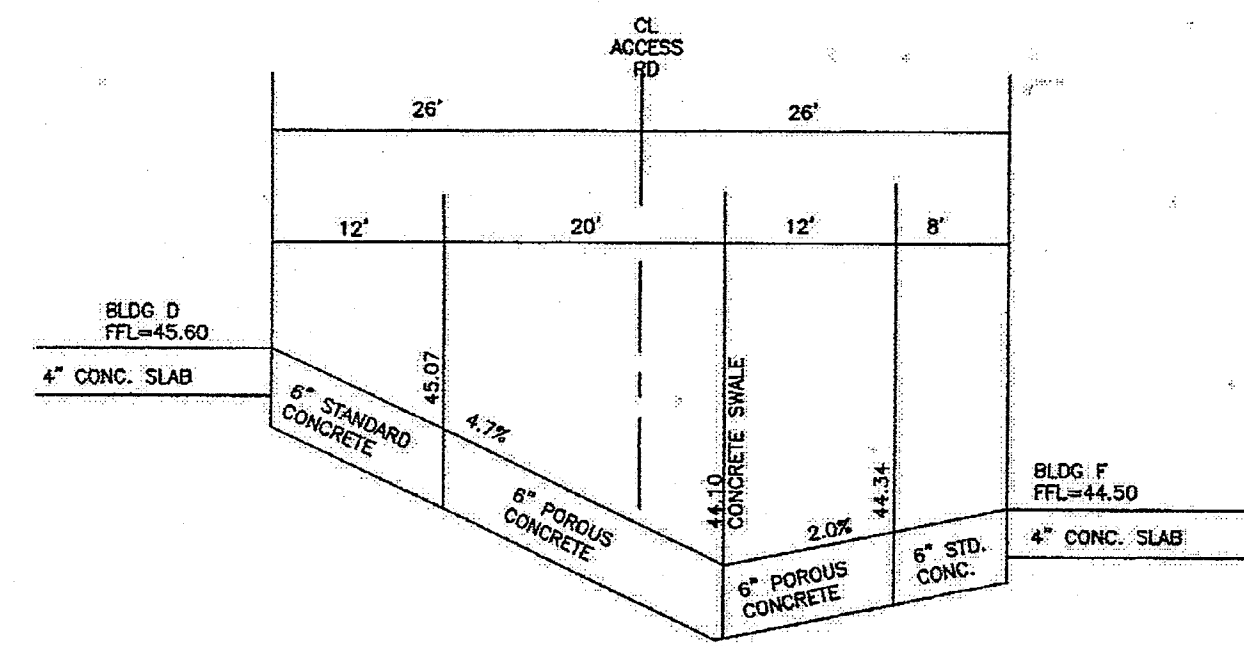
CALL 48 HOURS BEFORE YOU DIG
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SCALE IN FEET
0 30 60 90

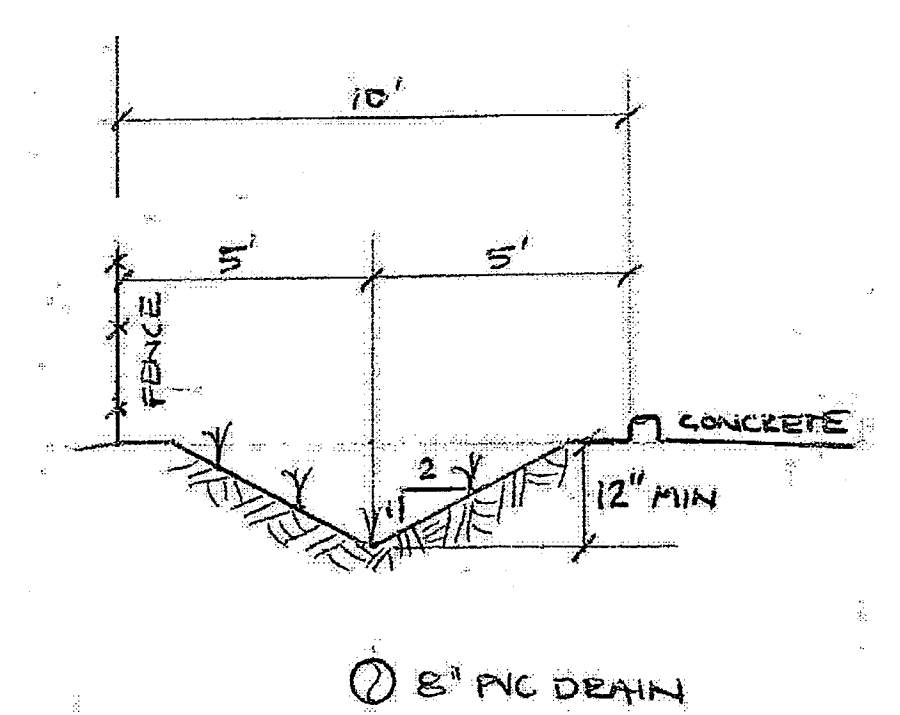
SCALE: 1 INCH = 30 FEET



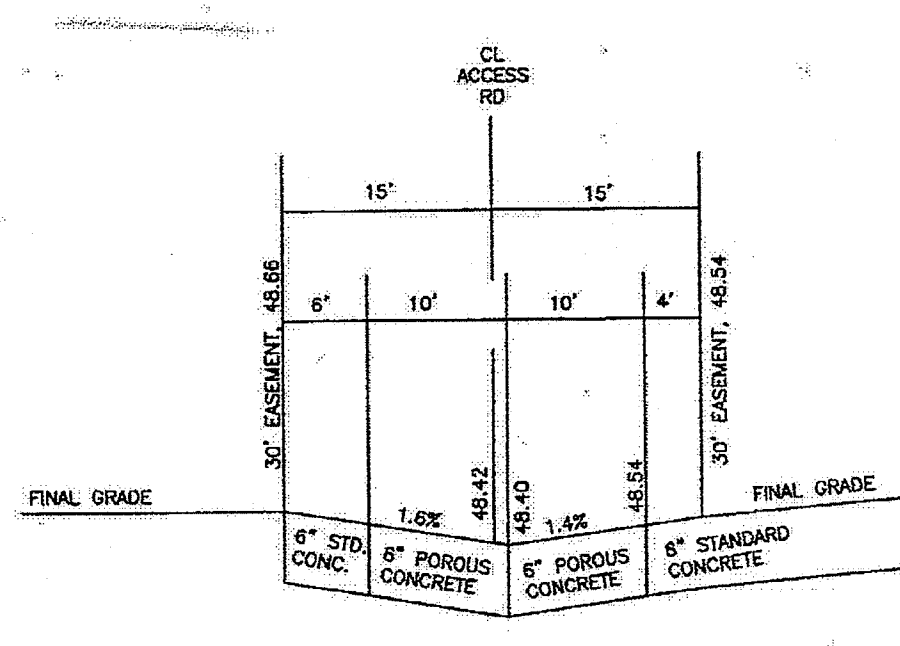
SECTION A-A



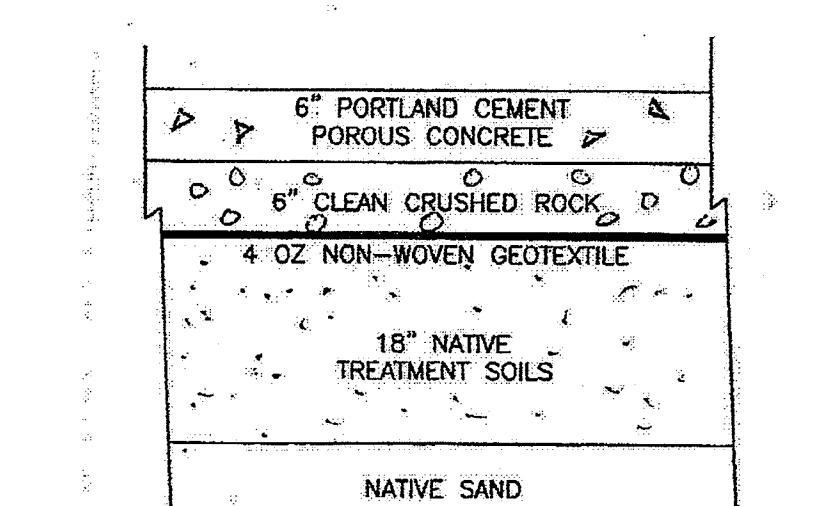
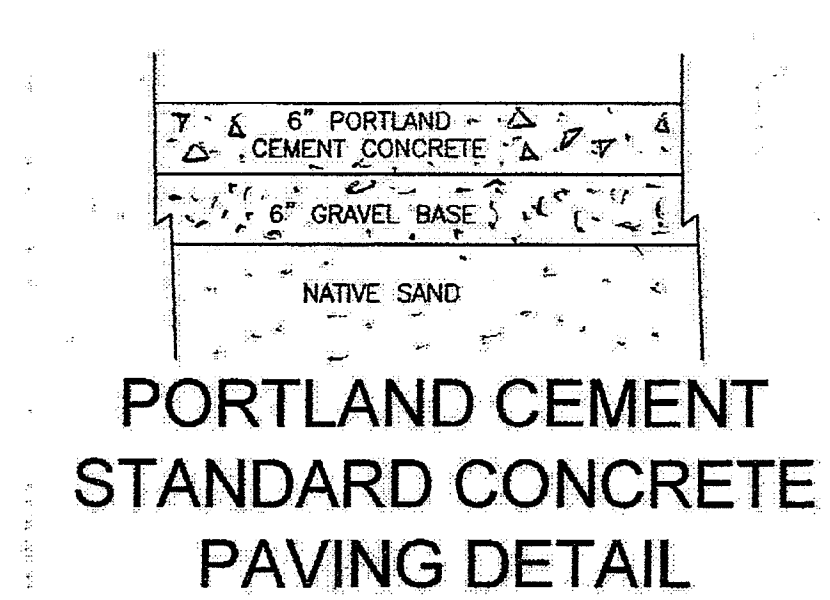
SECTION B-B



SECTION C-C



SECTION D-D



APPROVED
DEC 27 2012
J. Olson, P.E.
CITY OF FERDALE

31186
CITY OF FERDALE

MAY 30 2011

AS-BUILT

GRADING & PAVING PLAN

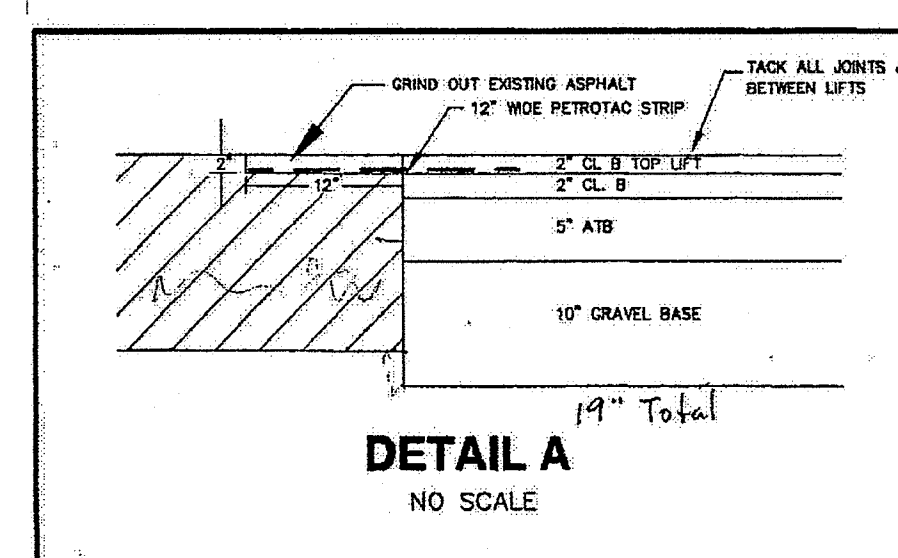
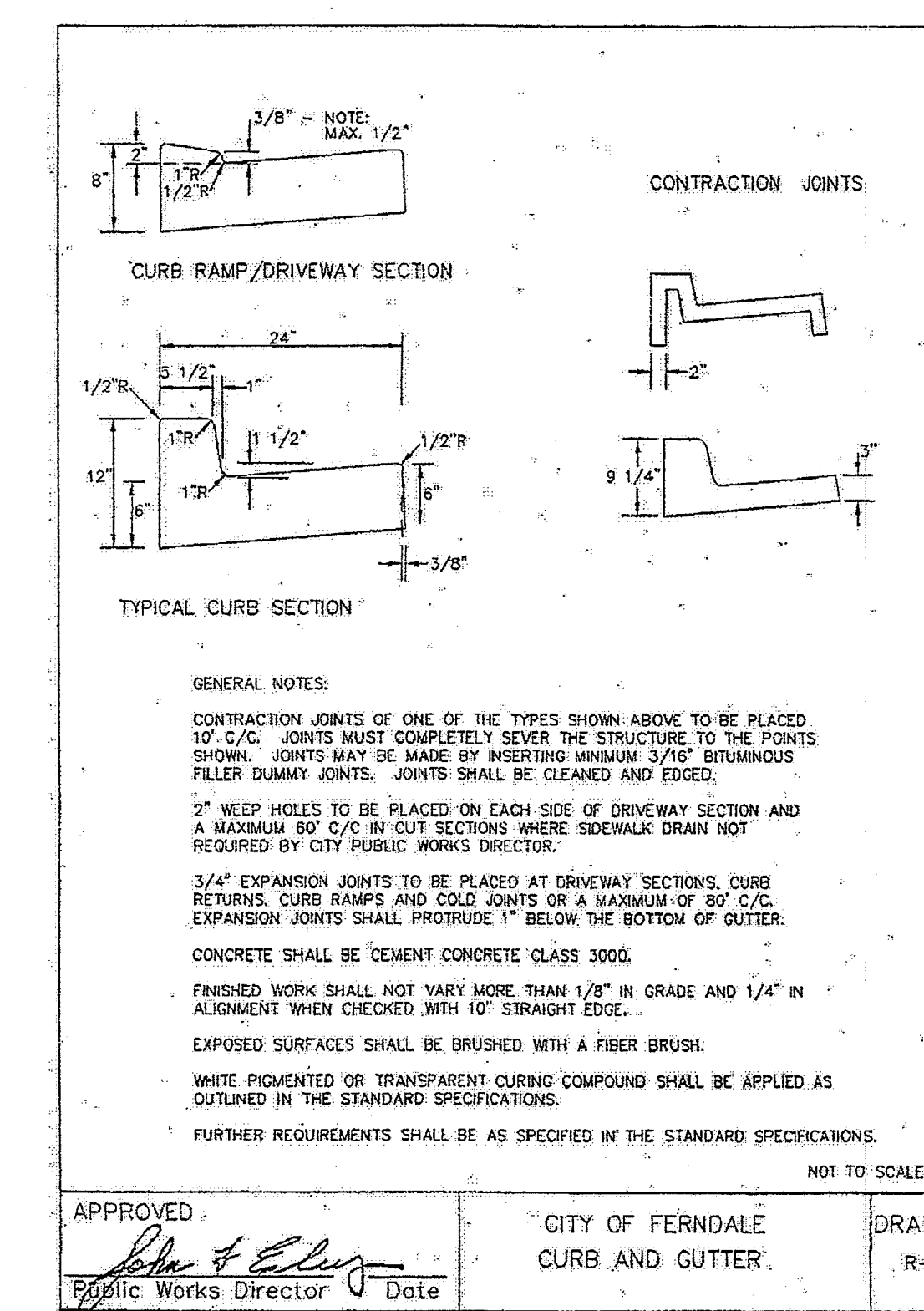
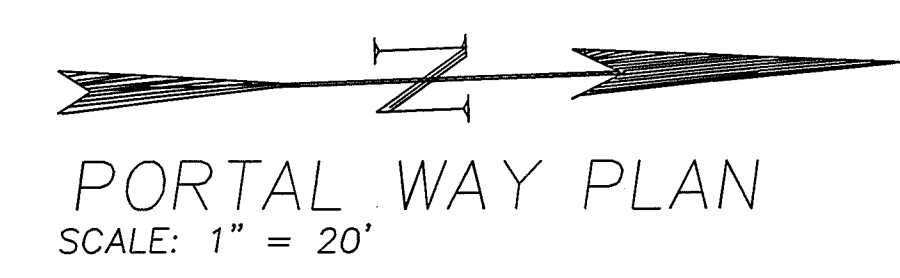
Pioneer Post Frame, Inc.
DWS Office and Storage
6180 Portall Way, Ferndale, WA 98248
SEC 17, T 39 N, R 2 E, W.M.

Craig Olson, P.E.
1040 Placemont Place
Bellingham, WA 98229
360.510.0480

REVISION	DATE	DESCRIPTION
2	5/26/11	REVISED PER CITY RED-LINES
1	11/5/10	AS-BUILT

SHEET: 9 OF 12

05500 010: 12/28/21 #521921



SECTION F – F

i. 3/4 Street-improvements. The existing center paved strip, approximately 26 feet wide, does need to be replaced or modified, provided that the existing edge of pavement is constructed in accordance with Detail A. The required improvements are from the edge of the existing pavement to the property being developed, including road widening, curb, gutter, sidewalk and storm drainage.

APPROVED: <i>John F. Elery</i> Public Works Director	CITY OF FERNDALE CURB AND GUTTER	DRAWN R-9
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APPROVED
DEC 27 2012
J. Miller, P.E.
CITY OF FERRISDALE



MAY 30 20

AS-BUILT

PORTAL WAY PLAN & PROFILE

Pioneer Post Frame, Inc.

Craig Olson, P.E.

QUEST

10

OF: 12

1. All work shall conform with applicable requirements set forth in the current edition of Standard Plans and Standard Specifications for Road, Bridge, and Municipal Construction, hereinafter referred to as "APWA", published by the Washington State Department of Transportation and American Public Works Association, except as modified herein; and with requirements of City of Ferndale Development Standards. In the event of conflict between standards, the more stringent requirement shall apply.
2. Existing utilities locations shown on this plan are presented in a general way only and are not necessarily complete. Locations of all existing utilities shall be independently verified by the Contractor prior to beginning construction. Call DIAL DIG at 1-800-424-5555 a minimum of 48 hours prior to beginning work. Any utilities, whether shown or not shown on this plan, which are damaged by the Contractor as a result of implementation of this plan shall be repaired or replaced by the Contractor at no additional cost to the Owner or Engineer.
3. Contractor shall inform the Design Engineer of any proposed changes to the plan prior to construction of that change. The Design Engineer is Craig Olson, P.E., Telephone 360-510-0480. Contractor shall keep a record of all changes to the plan and forward to the Design Engineer at the first of each month and more often if requested by Design Engineer.
4. Contractor shall provide temporary and permanent traffic control facilities in conformance with the Manual On Uniform Traffic Control Devices, current edition, and as required by the City of Ferndale.
5. Contractor shall restore all Public and Private property disrupted by the project to the satisfaction of the City of Ferndale.
6. Contractor shall obtain all required permits prior to commencement of the work.
7. Other Utilities may be working in the area of this project. Contractor shall cooperate fully with other utilities and with the Design Engineer and reviewing agency personnel.
8. All subgrade embankment, roadway and parking area gravel base, and trench backfill including, but not limited to, sanitary sewer lines, side sewers, storm drains, storm drain services, water mains and water services, shall be City Approved material. Where material is to be placed within road right-of-way or under concrete or asphalt surfaces, whether existing or proposed, said material shall be placed in maximum 8" (eight inch) lifts loose thickness, and compacted to 95% of maximum density as determined by ASTM D1559 or ASTM STP 399. Materials placed elsewhere shall be placed in 12" (twelve inch) lifts, loose thickness, and compacted to 90% of maximum density per ASTM D1559 or ASTM STP 399. Testing shall be performed by a qualified testing company prior to acceptance by the City of Ferndale.
9. Routine and final cleanup shall be included in the work.
10. Stripped organics and excess excavation material shall become the property of the Contractor and shall be disposed of at a location arranged by the Contractor at no additional cost to the Owner or Engineer.
11. Datum: NGVD29.
(Also see Other Notes.)

1. **CLEARING AND GRUBBING:** All objectionable growth shall be stripped. Removal of trees, shrubs, and other organic material shall include the removal of stumps and roots to the extent that no root greater than 3 inches in diameter remains within 5 feet of an underground structure or utility line nor under footings or paved areas. Grubbing in open areas shall include removal of stumps and 3 inch roots to 2 feet below finish grade elevations.
2. **SUBGRADE PREPARATION:** All organic materials including, but not limited to, top soil, grass, and plant debris which is located in an area to be covered with concrete or asphalt or gravel shall be removed prior to placement of any other materials. Stripped material shall be disposed of at a location arranged by the Contractor. Subgrade shall be firm, unyielding soil free from organic materials. If additional excavation is required to remove undesirable subgrade materials, said excavation shall be done by the Contractor at no additional expense to the Owner.
3. Contractor shall fully grade the site to serve the final grades and typical sections shown on the plans.
4. Material placed under proposed building locations, in road right-of-way, or under concrete or asphaltic concrete surfaces shall be placed in maximum eight inch lifts, loose thickness, and compacted per GENERAL NOTE No. 8.
5. Gravel base shall conform with APWA section 9-03.10 with maximum stone size of 5 inches in diameter, compacted to 95% ASTM D1559.
6. Crushed Surfacing Top course (CSTC), if required, shall conform with APWA section 9-03.9(3), minimum three inch depth, compacted to 95% ASTM D1559.
7. Asphaltic Concrete materials and installation shall conform with applicable sections of APWA section 5-04 and with the city of Ferndale Drawing R-4, except that vertical curb & gutter shown shall be replaced with rolled curb & gutter.
8. All depths shown or referenced are fully compacted.

(Also see GENERAL NOTES, and Other NOTES.)

1. The temporary erosion control system shall be installed prior to all other construction.
2. Where possible, maintain natural vegetation for silt control.
3. As construction progresses and seasonal conditions dictate, the erosion control facilities shall be maintained and / or altered as required by the City to insure continuing erosion / sedimentation control.
4. All temporary siltation controls shall be maintained in a satisfactory condition until such time that clearing and / or construction is completed, permanent drainage facilities are operational, and the potential for erosion has passed.
5. All disturbed land areas subject to erosion as determined by the City that will be left for 30 days or more shall be seeded with a mix and by a method approved by the City of Ferndale and maintained until seed germination is assured.
6. The right-of-way shall be kept clean. Tracking of mud and debris from the site will not be allowed. Failure to comply with this condition may result in all work on site being stopped until the condition is remedied.

(Also see GENERAL NOTES and Other Notes.)

1. All joints above final grade shall be grouted to inhibit water seepage through the joints. Additional; these same areas shall be waterproofed, not damp-proofed, from the inside of the pond.
2. Corners shall be grouted top to bottom.
3. Maximum allowable wall height above final grade is four feet. Backfill the over-excavated areas with clean, native sand to serve the final grades shown on the plans.

1. Contractor shall verify invert elevation of existing sewer pipe on Portal Way prior to construction. All damage to existing facilities resulting from the Contractor's operation shall be repaired at no expense to the Owner or Engineer.
2. All work and materials shall conform to applicable portions of the current edition of the Standard Plans and Standard Specifications, Division 7.
3. PVC sewer pipe and fittings shall be solid wall construction and shall conform to the requirements of ASTM D 3034 SDR 35 for pipe up to 15-inch diameter and ASTM F 679, Type 1 only, for pipe sizes 18 to 27 inch diameter.
4. Joints for solid wall PVC pipe shall conform ASTM D 3212 using elastomeric gaskets conforming to ASTM F 477.
5. Fittings for solid wall PVC sanitary sewer pipe shall be injection molded, factory welded, or factory solvent cemented.
6. The ends of all pipes shall be trimmed flush with the inside wall of the manhole. Pipe shall be grouted on both inside and outside of manhole.
7. All manholes shall be Type 1 - 48 inch per Standard Plan B-23a, except as noted.
8. Placement and compaction of trench backfill shall be done in eight inch lifts, compacted to 95% density modified proctor and shall conform with GENERAL NOTE No. 8.
9. Bedding for PVC sanitary sewer pipe shall be 6 inch compacted Depth of Bedding Material for Thermoplastic Pipe per Standard Specification 9-03.16. Pea gravel or other suitable material may also be used with approval from city personnel.
10. Trench backfill material for PVC sanitary sewer pipe shall consist of aggregate for gravel base, as specified in Section 9-0.10, excepting however, that 100 percent of the material shall pass a 2-1/2 inch sieve opening.
11. At locations where a sanitary sewer crosses a potable water line at right angles, a minimum of 18" vertical separation shall be maintained per section CI-9.1.4 of the DOE Criteria for Sewage Works Design. Additionally the sewer pipe shall be centered at the point of crossing so that the joints will be equidistant and as far away as possible from the water line. For Sewer lines crossing OVER a water line, a waterline casing per DOE Criteria for Sewage Works Design Section CI-9.1.4A is required on the water line.

(Also see GENERAL NOTES and Other Notes)

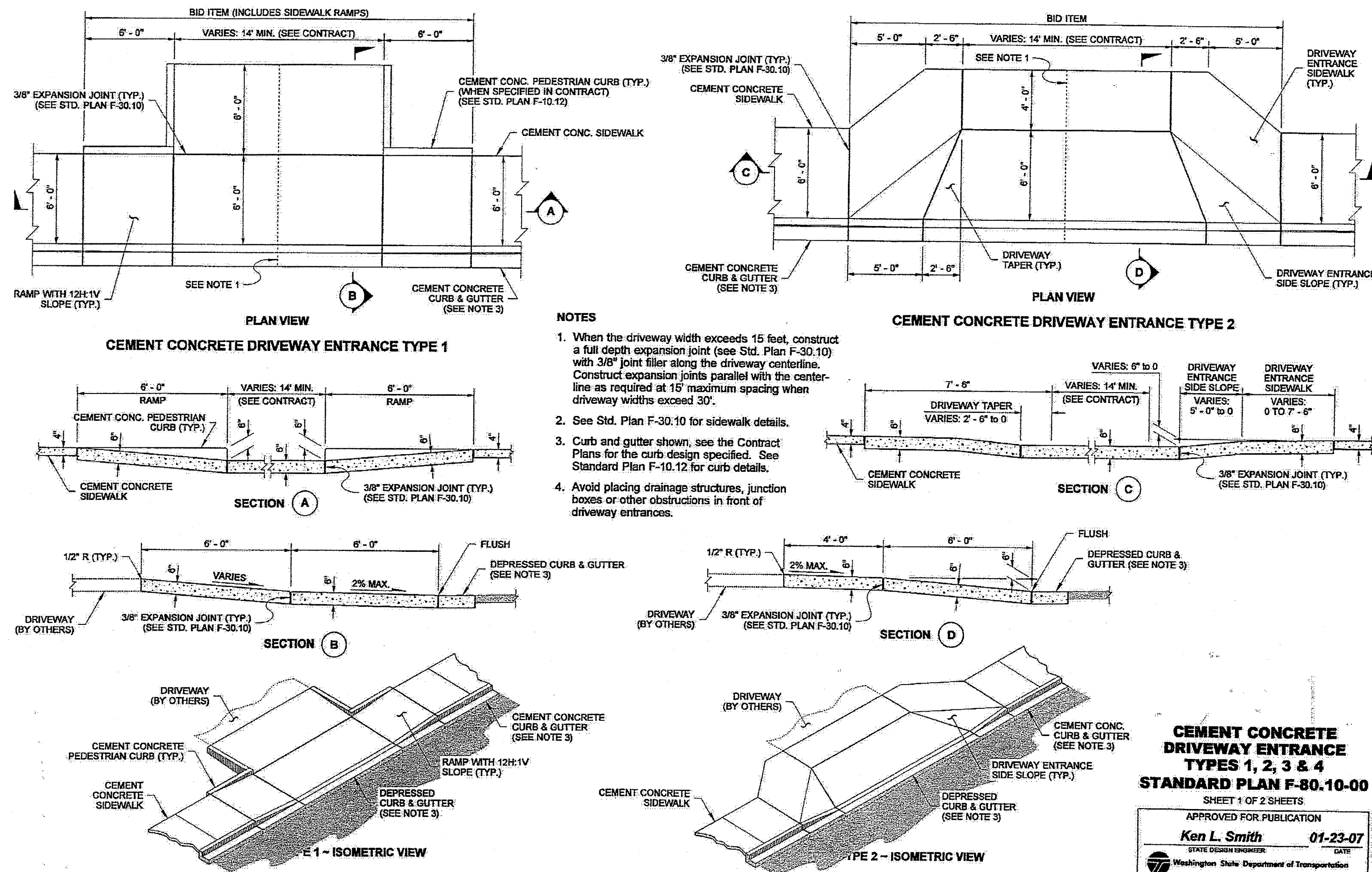
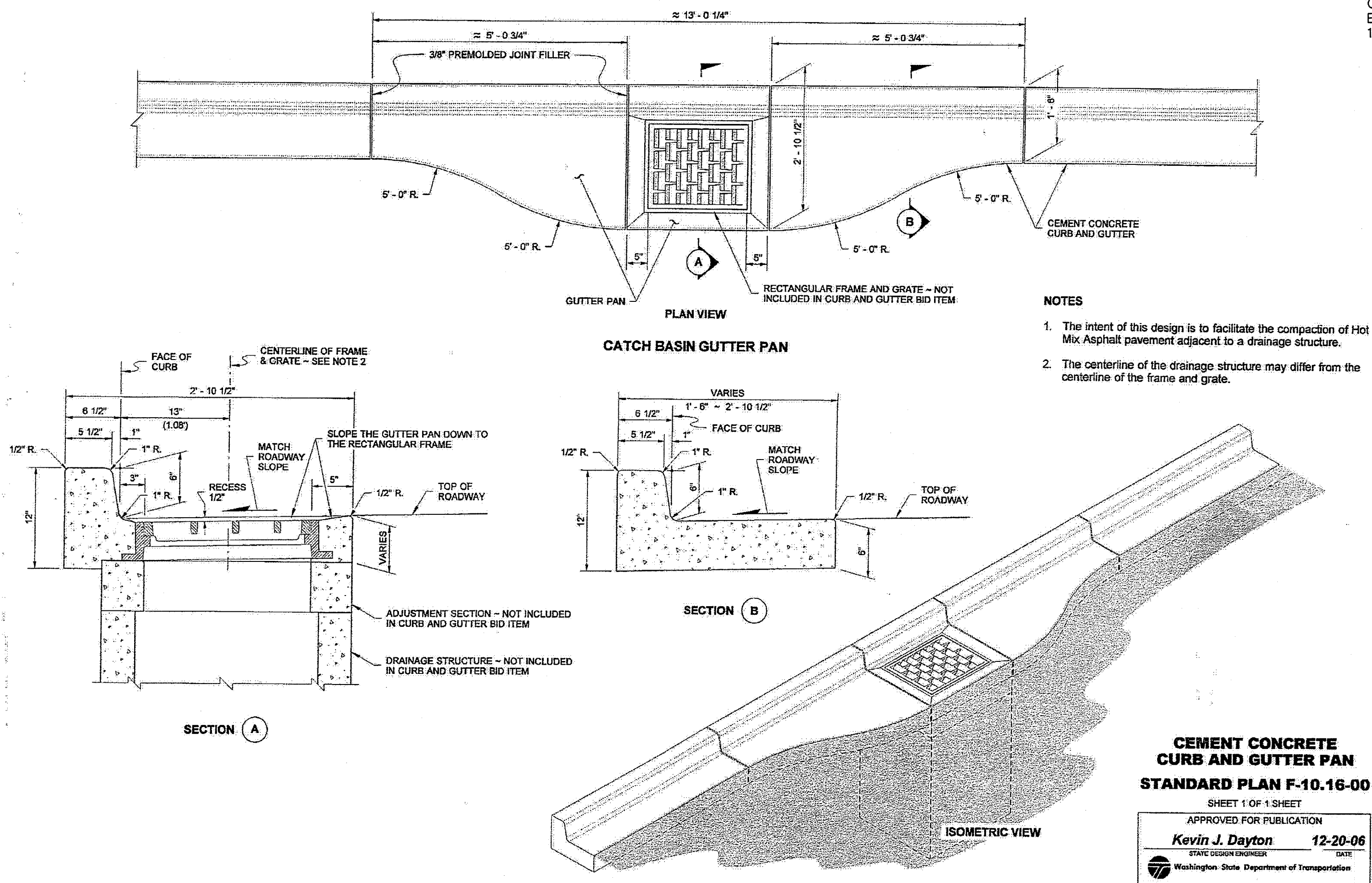
1. Water-related construction including trench excavation, pipe and fitting installations and testing, and backfilling shall conform with applicable sections of the Standard Specifications including Sections 7-09 to 7-15, and Section 9-30 and in accordance with the City of Ferndale Development Guidelines and Improvement Standards.
2. Water Main shall be Class 50 ductile Iron Pipe conforming with Section 9-30.1 of the Standard Specifications. Water fittings for the ductile iron pipe shall meet requirements set forth in Section 9-30.2 of the Standard Specifications.
3. Fire Hydrants shall conform with the City of Ferndale Development Standards Section 705.A.5.
4. Depth of cover from final grade to top of pipe shall be 36 inches minimum.
5. If water services are to utilize polyethylene pipe, installation shall include Number 10 copper wire, once attached to the polyethylene pipe and studded up approximately three feet from the end of the service.
6. Pressure testing of the water main, disinfection and "As-Built's" shall be in conformance with applicable sections of the Standard Specifications. Test pressure shall be 150 psi above working pressure, but not less than 200 psi.
7. At locations where a sanitary sewer crosses a potable water line at right angles, a minimum of 18" vertical separation shall be maintained per section C1-9.1.4 of the DOE Criteria for Sewage Works Design. Additionally the sewer pipe shall be centered at the point of crossing so that the joints will be equidistant and as far away as possible from the water line. For Sewer lines crossing OVER a water line, a watertight casing per DOE Criteria for Sewage Works Design Section C1-9.1.4A is required on the water line.

(Also see GENERAL NOTES and Other Notes.)

1. Contractor shall verify invert elevation of existing ADS storm drain pipe stub & cap on Portal Way prior to construction. All damage to existing facilities resulting from the Contractor's operation shall be repaired at no expense to the Owner or Engineer.
2. All work shall conform with applicable sections of the City of Ferndale Development Standards and with applicable sections of the Department of Ecology Stormwater Management Manual for the Puget Sound Basin, current edition, and with applicable sections of WSDOT Standard Plans and Standard Specifications..
3. IMPORTANT: Surface drainage on site is dependent upon accurate grading and paving. Subsurface drainage, including pipes and other structures, is dependent upon accurate elevation and placement of said facilities. Contractor shall utilize the services of a competent surveyor to assure proper installation of all drainage facilities.
4. Drainage structures, culverts, and conduits shall meet requirements set forth in APWA 9-05.
5. Rip-Rap shall conform to APWA Section 9-13.
6. PVC pipe shall be Polyvinyl Chloride Pipe conforming to the provisions of ASTM D 3034 SDR 35, and AASHTO M 278.
7. Perforated PVC pipe, if required, shall be Polyvinyl Chloride Pipe conforming to the provisions of ASTM D 3034 SDR 35, and AASHTO M 278.
8. CPE Pipe shall be smooth interior (N-12 type) Corrugated Polyethylene Pipe conforming to requirements set forth in AASHTO M 294.
9. CMP Pipe, if required, shall be galvanized or aluminum Corrugated Metal Pipe conforming to requirements set forth in AASHTO M 36. Asphalt treated pipe is specifically prohibited.

(Also see GENERAL NOTES and Other Notes.)

1. Placement of porous concrete mix shall be performed by certified installers.
2. The paving section, including native sand, native treatment soils, non-woven geotextile fabric, clean crushed stone and porous concrete shall be placed in accordance with the typical section and final grades shown on the plans.
3. All depths shown are fully compacted.
4. Where possible, do not run loaded construction equipment over the areas intended for porous concrete installation. Where access requires equipment to drive on these areas, Contractor shall minimize the extent of soil disturbance.
5. Use non-vibratory roller compaction on the treatment soils.
6. Follow all recommendations from the manufacturer for installation of porous concrete. This includes proper subgrade, paving section, forms, concrete placement, roller compaction and installation of a moisture barrier immediately after placement.
7. Once the porous concrete has been placed, Contractor shall protect the surface from all contaminants including, but not limited to, dust, debris, oil, mud, solvents, chemicals, fuel, sediment-laden water or any other material which might plug or clog the openings in the pavement.
8. MAINTENANCE of porous concrete is intended to assure the proper, long term performance of the system. The most effective method is to prevent contaminants from being deposited on the porous concrete surface. If materials are accidentally spilled or otherwise deposited on the surface they must be cleaned up immediately. This may be done with a heavy-duty vacuum system or high-pressure (2000+ psi) water spray.
9. ROUTINE MAINTENANCE shall include immediate clean-up of any deposited debris and, if required by the manufacturer, vacuuming the entire surface at the recommended time interval, typically once per year.



CALL 48 HOURS
BEFORE YOU DIG
1-800-424-5555

NOTES

1. The intent of this design is to facilitate the compaction of Hot Mix Asphalt pavement adjacent to a drainage structure.
2. The centerline of the drainage structure may differ from the centerline of the frame and grate.

**CEMENT CONCRETE
CURB AND GUTTER PAN
STANDARD PLAN F-10.16-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Kevin J. Dayton 12-20-06

STATE DESIGN ENGINEER DATE

 Washington State Department of Transportation

APPROVED

DEC 27 2012

**CEMENT CONCRETE
DRIVEWAY ENTRANCE
TYPES 1, 2, 3 & 4
STANDARD PLAN F-80.10-00**

SHEET 1 OF 2 SHEETS

APPROVED FOR PUBLICATION

Ken L. Smith **01-23-07**
STATE DESIGN ENGINEER DATE

 Washington State Department of Transportation

AS-BUILT

CONSTRUCTION NOTES & DETAILS

Pioneer Post Frame, Inc.

Craig Olson, P.E.

SHEB

OF: 12

