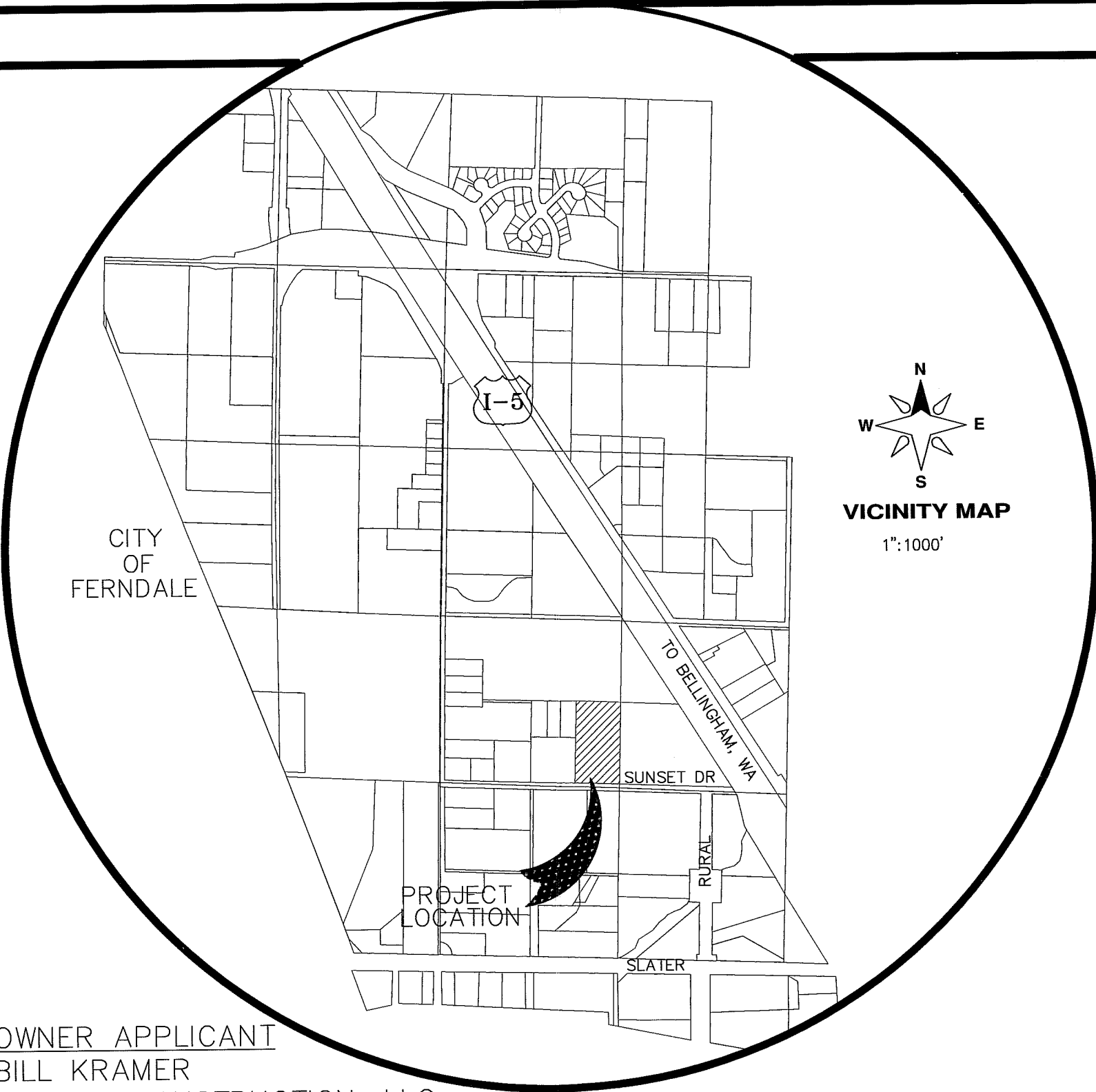


A PORTION OF SECTION 15
TOWNSHIP 40 N., RANGE 3 E. OF THE W.M.
CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON

SUNSET PARK PLAT

AS-BUILT DRAWINGS

CITY PROJECT NUMBER LP 2006-15



OWNER APPLICANT
BILL KRAMER
KRAMER CONSTRUCTION, LLC
1422 SUNSET AVE.
FERNDAL, WA 98248
360-303-0515

ENGINEER
LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
CONTACT: RAMON LLANOS, P.E.
(360) 383-0620

SURVEYOR
LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
CONTACT: KYLE HAGGITH, PLS.
(360) 383-0620

SURVEYORS NOTES:
-VERTICAL DATUM - NGVD-29, NAVD-88
-HORIZONTAL DATUM - NAD 83/91
-BASIS OF BEARING - C.O.F. MONS #112 AND #101.

AS-BUILT DRAWINGS

Sht No.	Sheet Title
01	COVER SHEET
02	EXISTING CONDITIONS
03	SUBDIVISION PLAN
04	STREET AND STORM DRAINAGE PLAN & PROFILE
05	ROOF & YARD PLAN & CURB WARPING
06	DETENTION FACILITY & CONTROL STRUCTURE
07	STREET AND STORM DRAINAGE DETAILS
08	SANITARY SEWER PLAN AND PROFILE
09	SANITARY SEWER DETAILS
10	WATER DISTRIBUTION PLAN AND PROFILE
11	WATER DISTRIBUTION DETAILS
12	COMMON UTILITY - STREET LIGHTING - LANDSCAPING & SIGNAGE PLAN
13	CONFLICT UTILITY RESOLUTION PLAN
14	FERNDAL GENERAL CONSTRUCTION NOTES

LEGEND:

	= FND BRASS MON		= EXIST OVERHEAD POWER
	= FND 1/2" REBAR W/ YPC PLS# 18897		= EXIST UNDERGROUND POWER
	= FND REBAR AND CAP PLS# 18927		= EXIST OVERHEAD PHONE
	= FND REBAR AND CAP PLS# 13138		= EXIST UNDERGROUND PHONE
	= EXIST SD CATCH BASIN (TYPE 1)		= EXIST UNDERGROUND TV CABLE
	= EXIST SD CATCH BASIN (TYPE 2)		= EXIST GAS MAIN
	= EXIST SD INLET		= EXIST WATER LINE
	= EXIST SANITARY SEWER MANHOLE		= EXIST SANITARY SEWER LINE
	= EXIST SANITARY SEWER CLEANOUT		= EXIST STORM DRAIN LINE
	= EXIST SANITARY SEWER SERVICE		= EXIST BARBED WIRE FENCE
	= EXISTING WATER BLOW-OFF VALVE		= EXIST CONC. FENCE OR RET. WALL
	= EXISTING WATER METER BOX		= EXIST CONTOUR (INDEX)
	= EXISTING WATER VALVE		= EXIST CONTOUR (NORMAL)
	= EXISTING FIRE HYDRANT		= SILT FENCE
	= EXIST POWER/AND OR UTILITY POLE		= AS BUILT STORM DRAIN LINE
	= EXIST GUY WIRE		= AS BUILT SAN. SEWER LINE
	= EXIST LIGHT POLE		= AS BUILT WATER LINE
	= EXIST UTILITY POLE		= AS BUILT ROOF DRAIN
	= EXIST SIGN		= STOP SIGN

	= LIGHT POLE LUMINARE W/DROP
	= AS BUILT FIRE HYDRANT
	= AS BUILT WATER METER BOX
	= AS BUILT WATER BLOW-OFF
	= GATE VALVE
	= 45" BEND
	= AS BUILT STORM DRAIN CLEANOUT
	= AS BUILT STORM DRAIN CATCH BASIN
	= AS BUILT STORM CONTROL STRUCTURE
	= AS BUILT SANITARY SEWER SERVICE
	= AS BUILT SEWER CLEANOUT
	= AS BUILT SEWER MANHOLE
	= BOLLARD
	= 6" SIDEWALK (DRIVEWAY SECTION)
	= 4" SIDEWALK
	= ROAD PAVEMENT

ABBREVIATIONS:

AB	= AS-BUILT
BOW	= BACK OF WALK
BOW CO	= BACK OF WALK CLEAN OUT
BW	= BOTTOM OF WALL
COF	= CITY OF FERNDAL
C	= CENTERLINE
CONC	= CONCRETE
CPDP	= CORRUGATED PLASTIC DRAIN PIPE
DI	= DUCTILE IRON
DOE	= DEPARTMENT OF ECOLOGY
DTL	= DETAIL
EG	= EXISTING GROUND
EL	= ELEVATION
EXST	= EXISTING
FF	= FINISH FLOOR
FG	= FINISH GROUND
FND	= FOUND
G.V.	= GATE VALVE
HYD	= FIRE HYDRANT
IE	= INVERT ELEVATION
LF	= LINEAR FEET
LT	= LEFT
OHWM	= ORDINARY HIGH WATER MARK
PERF	= PERFORATED PIPE
PERM.	= PERMANENT
PRP	= PROPOSED
PVC	= POLYVINYL CHLORIDE PIPE
RT	= RIGHT
RY	= ROOF AND YARD
SD	= STORM DRAIN
SS	= SANITARY SEWER
SSCO	= SANITARY SEWER CLEAN OUT
SF	= SQUARE FEET
SMH	= SANITARY SEWER MANHOLE
STA.	= STATION
TEMP.	= TEMPORARY
TW	= TOP OF WALL
WA	= WATER

APPROVED

CITY OF FERNDAL

DRAWN BY SR DATE 4/16/2009
CHECKED BY RL DATE 4/16/2009

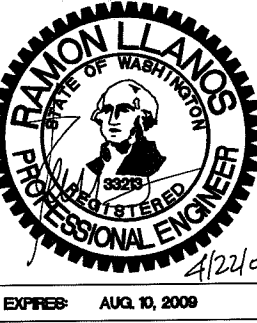
SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC

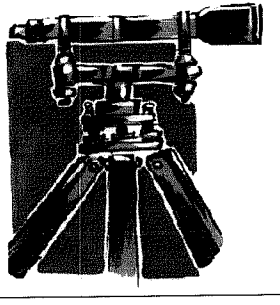
ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN
SUNSET PARK PLAT HAVE BEEN INSPECTED BY
LDES AND TO THE BEST OF MY KNOWLEDGE,
HAVE BEEN CONSTRUCTED IN CONFORMANCE
WITH THE CITY OF FERNDAL DEVELOPMENT
STANDARDS, THE CITY OF FERNDAL MUNICIPAL
CODE, SUBSEQUENT STANDARDS ADOPTED BY
REFERENCE THEREIN, AND STANDARD
ENGINEERING PRACTICE.
RAMON LLANOS, P.E. 4/22/09



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:
4/22/09
KYLE HAGGITH, PLS. 4/22/09



LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

SUNSET PARK PLAT
COVER SHEET
AS-BUILT DESIGN

REVISIONS - INITIALS/DATE/COMMENTS

SR	6/18/2008	SUBMITTAL #1
SR	12/23/2008	SUBMITTAL #2
SR	4/16/2009	SUBMITTAL #3

SHEET

01

OF 14

00386.001 7.909 DD

LEGEND:

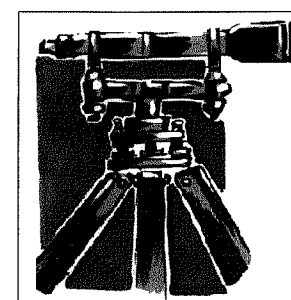
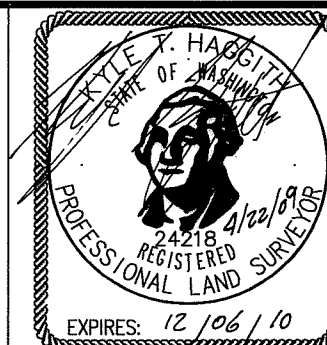
- FND BRASS MON
- FND 1/2" REBAR W/ YPC PLS# 18897
- FND REBAR AND CAP PLS# 18927
- FND REBAR AND CAP PLS# 13138
- EXIST SD CATCH BASIN (TYPE 1)
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- EXISTING WATER METER BOX
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXIST POWER/AND OR UTILITY POLE
- EXIST GUY POLE
- EXIST GUY WIRE
- EXIST LIGHT POLE
- EXIST UTILITY POLE
- EXIST SIGN

RURAL RD
N01°12'54"E COF BASIS
1325.16'

SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC



LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

SUNSET PARK PLAT EXISTING CONDITIONS AS-BUILT DESIGN

REVISIONS - INITIALS/DATE/COMMENTS

SR	5/30/2008	SUBMITTAL #1
SR	3/10/2009	SUBMITTAL #2
SR	4/16/2009	SUBMITTAL #3

SHEET

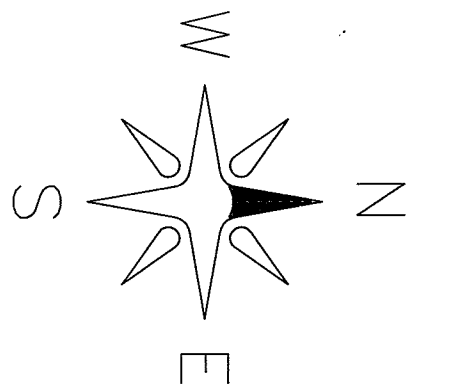
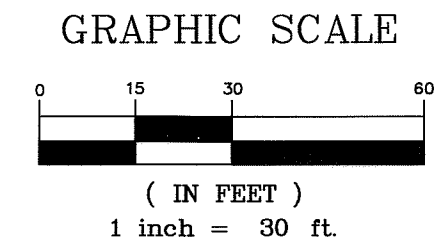
02

OF

14

SURVEYORS NOTES

- 1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION.
- 2) EQUIPMENT USED: NIKON DT500: 00'03" ± 2 PPM, ± 2 MM AND
- 3) THIS SURVEY MEETS OR EXCEEDS THE STANDARDS AS SET FORTH IN WAC 332-130-090.
- 4) BASIS OF BEARING: CITY OF FERNDAL MONS #101 AND #112, BEARING N01°12'13"E FROM #101 TO #112
- 5) SURVEY WAS PERFORMED ON 09-20-06 BY KYLE HAGGITH AND ERIC STURGEON
- 6) HORIZONTAL DATUM: CITY OF FERDALE, MONS #101 AND #112
- 7) VERTICAL DATUM: CITY OF FERDALE, RURAL AND SUNSET STREET IMPROVEMENTS DATED 07-29-05, RIM OF MH #2, ELEVATION 44.48



SUNSET AVENUE

390233 146156
EDWARD P. SIMONIAN &
LYLE T. MYDLAND

390233 359190
WILLIAM E. &
JERELYN J. KRAMER

390233 428167
DONALD R &
CANDANCE C. BUETHORN

390233 407222
ADOLPH L-MARJORIE
J. BJORKSTAM

390233 337232
GENE W. COOPER

390233 330.40' (ROS)
(MEAS. 330.62')

BY *RC*
CITY OF FERNDAL

00386.002 7.9.09 DD

SUNSET AVENUE

30' 30'

N85°25'40"W 1266.30'
(N85°24'12"W 1266.23' ROS)

661.79'
(661.74' ROS)

RURAL RD
N01°12'54"E COF BASIS
1325.16'

COF 101
COF 112
COF 113

390233 146156
EDWARD P. SIMONIAN &
LYLE T. MYDLAND

390233 359190
WILLIAM E. &
JERELYN J. KRAMER

SUNSET PARK

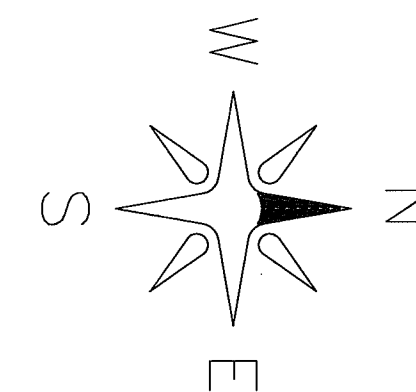
390233 428167
DONALD R &
CANDANCE C. BUETHORN

390233 407222
ADOLPH L-MARJORIE
J. BJORKSTAM

390233 337232
GENE W. COOPER

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.



DRAINAGE NOTE:

LOTS 3 THROUGH 14 WILL REQUIRE AN INDIVIDUAL INFILTRATION SYSTEM. STUB PROVIDED FOR SAID
LOTS ARE FOR OVERFLOW ONLY.

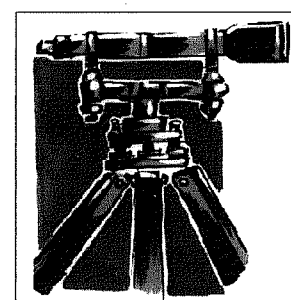
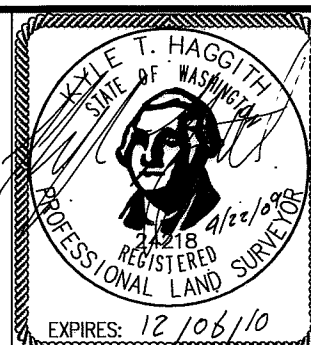
APPROVED
BY CITY OF FERNDALE

DRAWN BY SR DATE 4/16/2009
CHECKED BY RL DATE 4/16/2009

SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC



LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

SUNSET PARK PLAT
SUBDIVISION PLAN
AS-BUILT DESIGN

REVISIONS - INITIALS/DATE/COMMENTS

SR	5/30/2008	SUBMITTAL #1
SR	12/23/2008	SUBMITTAL #2
SR	4/16/2009	SUBMITTAL #3

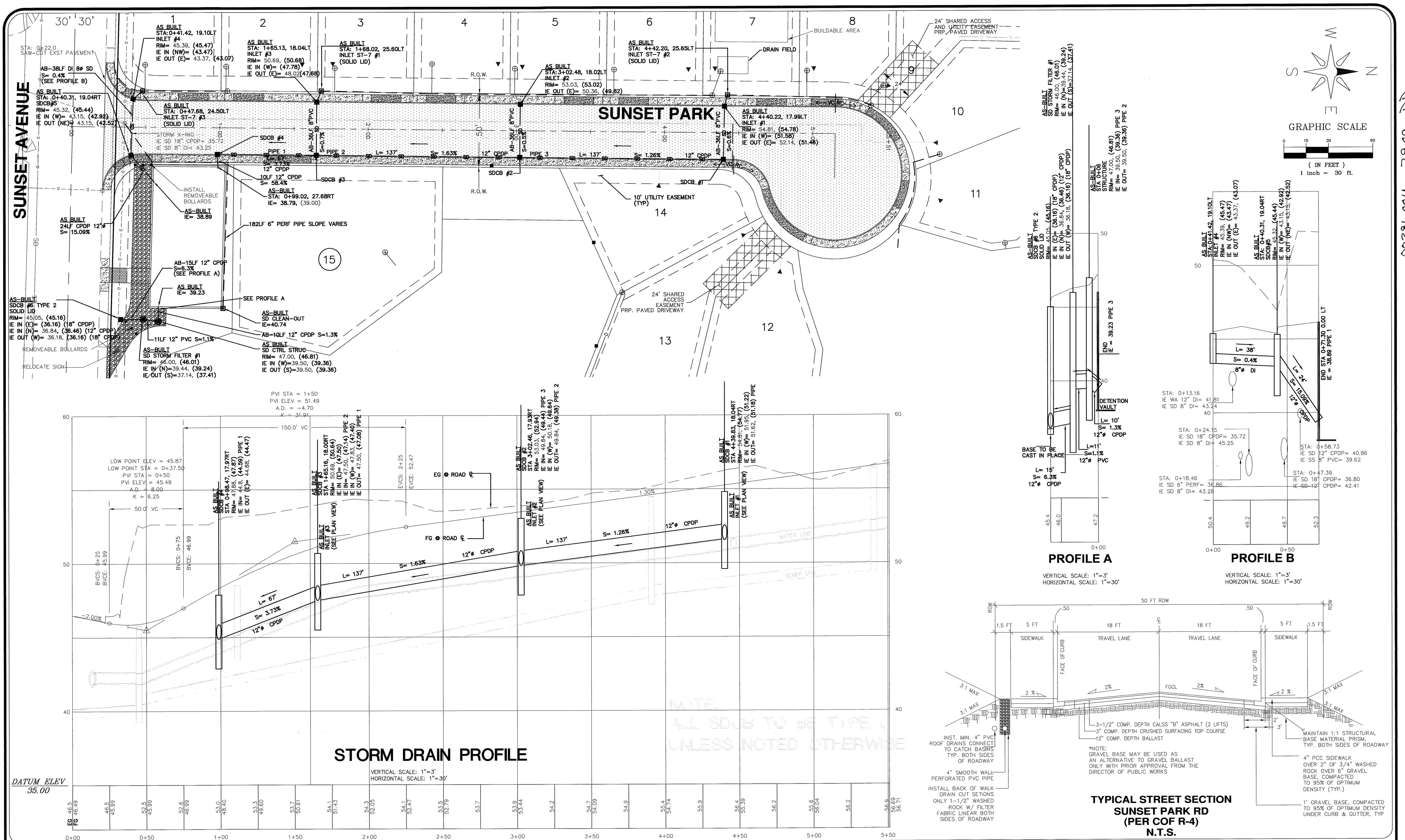
SHEET

03

OF

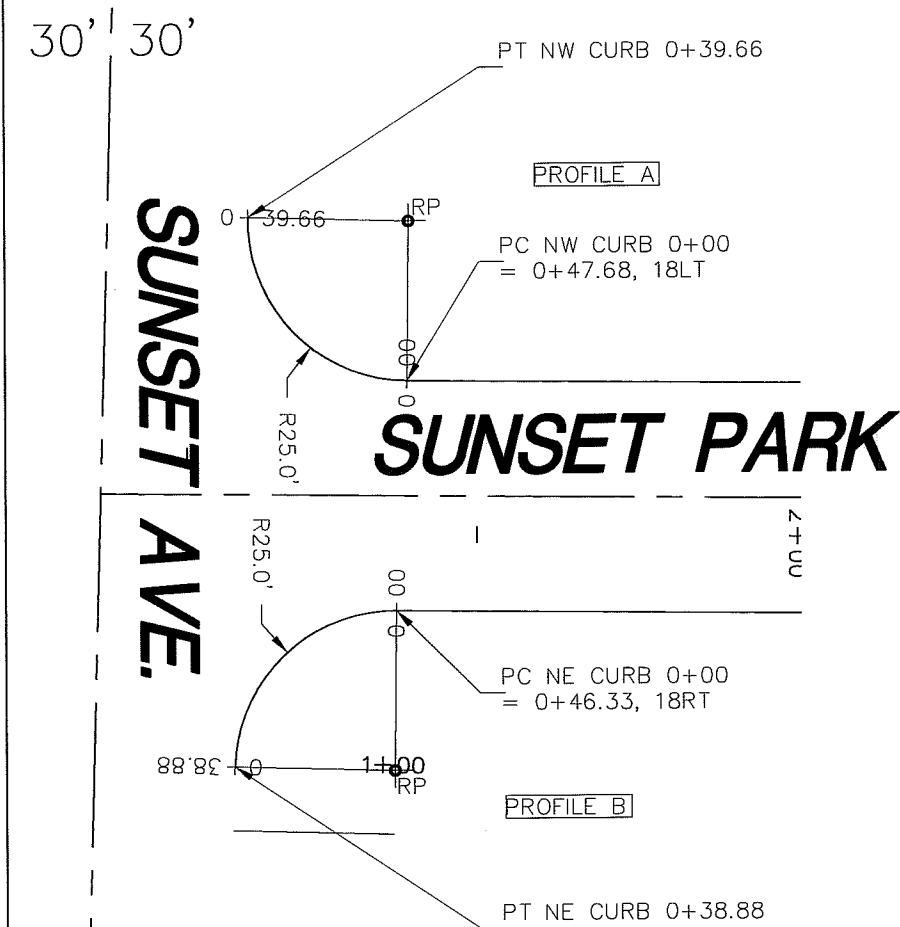
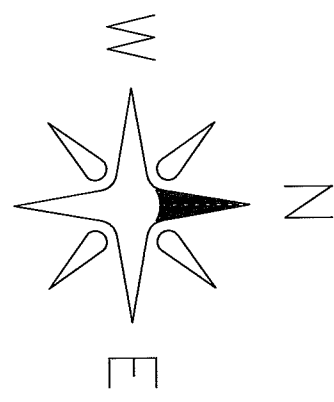
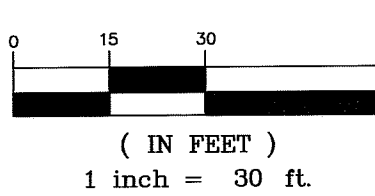
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00386.003 79.09 DD

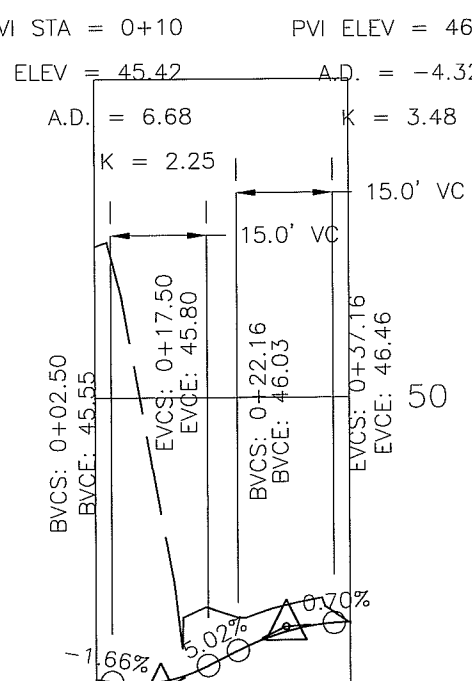


DRAWN BY SR DATE 4/16/2009 CHECKED BY RL DATE 4/16/2009		SUNSET PARK PLAT		LDES, INC. 5160 INDUSTRIAL PL #108 FERNDAL, WA 98248 PHONE 360-383-0620 FAX 360-383-0639		SUNSET PARK PLAT STREET AND STORM DRAINAGE PLAN & PROFILE AND ROAD CROSS SECTION AS-BUILT DESIGN		REVISIONS - INITIALS/DATE/COMMENTS		SHEET 04 OF 14	
JOB # 6057		FOR: KRAMER CONSTRUCTION, LLC						SR 6/18/2008 SUBMITTAL #1			
								SR 12/23/2008 SUBMITTAL #2			
								SR 4/16/2009 SUBMITTAL #3			

GRAPHIC SCALE

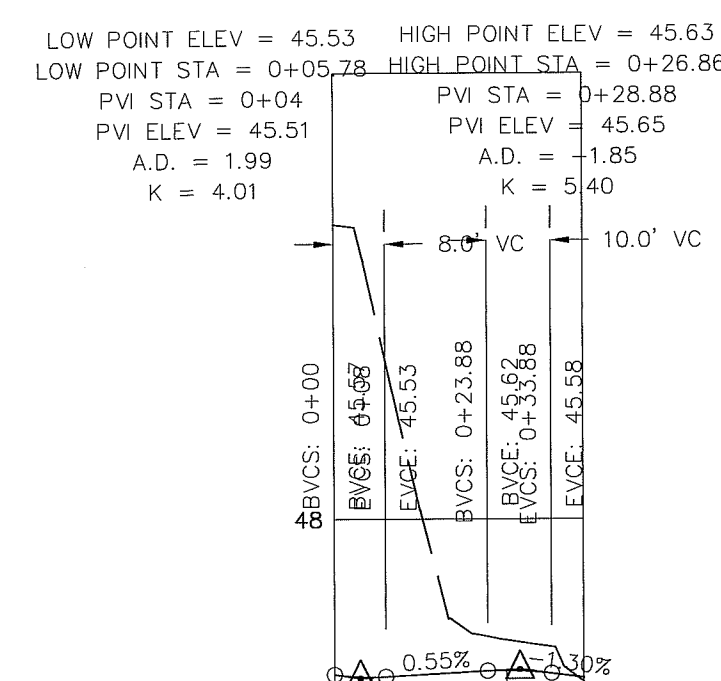


LOW POINT ELEV = 45.52
LOW POINT STA = 0+06.23 PVI STA = 0+29.66
PVI STA = 0+10 PVI ELEV = 46.41
A.D. = 6.68 K = 3.48
K = 2.25 15.0' VC



PROFILE A
VERTICAL SCALE: 1"=3'
HORIZONTAL SCALE: 1"=30'

DATUM ELEV
35.00



PROFILE B
VERTICAL SCALE: 1"=3'
HORIZONTAL SCALE: 1"=30'

DATUM ELEV
35.00

ROOF & YARD NOTES:

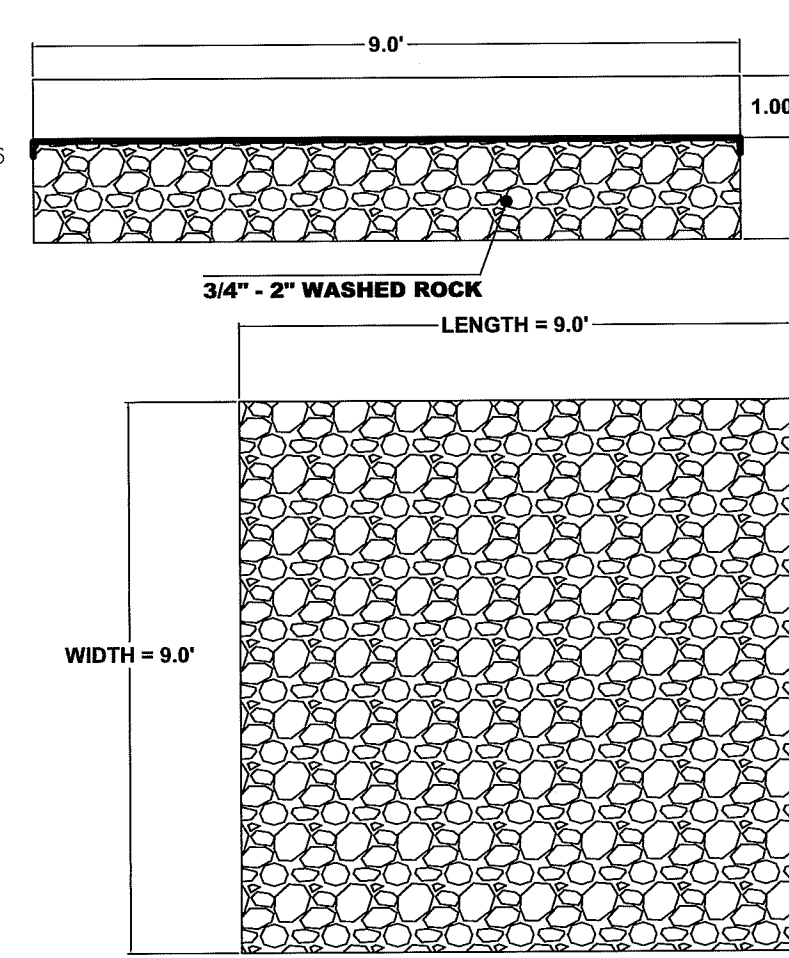
1. LOTS 1 AND 2 SHALL DISCHARGE DIRECTLY INTO THE ROOF & YARD SYSTEM
2. LOTS 3 THROUGH 14 SHALL PROVIDE AN INFILTRATION SYSTEM FOR ROOF & YARD. THE STUB PROVIDED FOR SAID LOTS IS AN OVERFLOW FOR THE INFILTRATION SYSTEM.
3. DESIGN OF THE INFILTRATION SYSTEM VARIES DEPENDING ON THE IMPERVIOUS AND PervIOUS AREAS.

ROOF & YARD DESCRIPTION

- RY-1
INSTALL 12LF
4" ADS N-12
R-Y DRAIN
- RY-2 TO RY-9
INSTALL 11LF
4" ADS N-12
R-Y DRAIN
- RY-10
INSTALL 6LF
4" ADS N-12
R-Y DRAIN
- RY-11
INSTALL 2LF
4" ADS N-12
R-Y DRAIN
- RY-12
INSTALL 6LF
4" ADS N-12
R-Y DRAIN
- RY-13
INSTALL 9LF
4" ADS N-12
R-Y DRAIN

NOTE:

LOTS 3-14 WILL REQUIRE INDIVIDUAL INFILTRATION SYSTEMS FOR THE ROOF AND YARD.

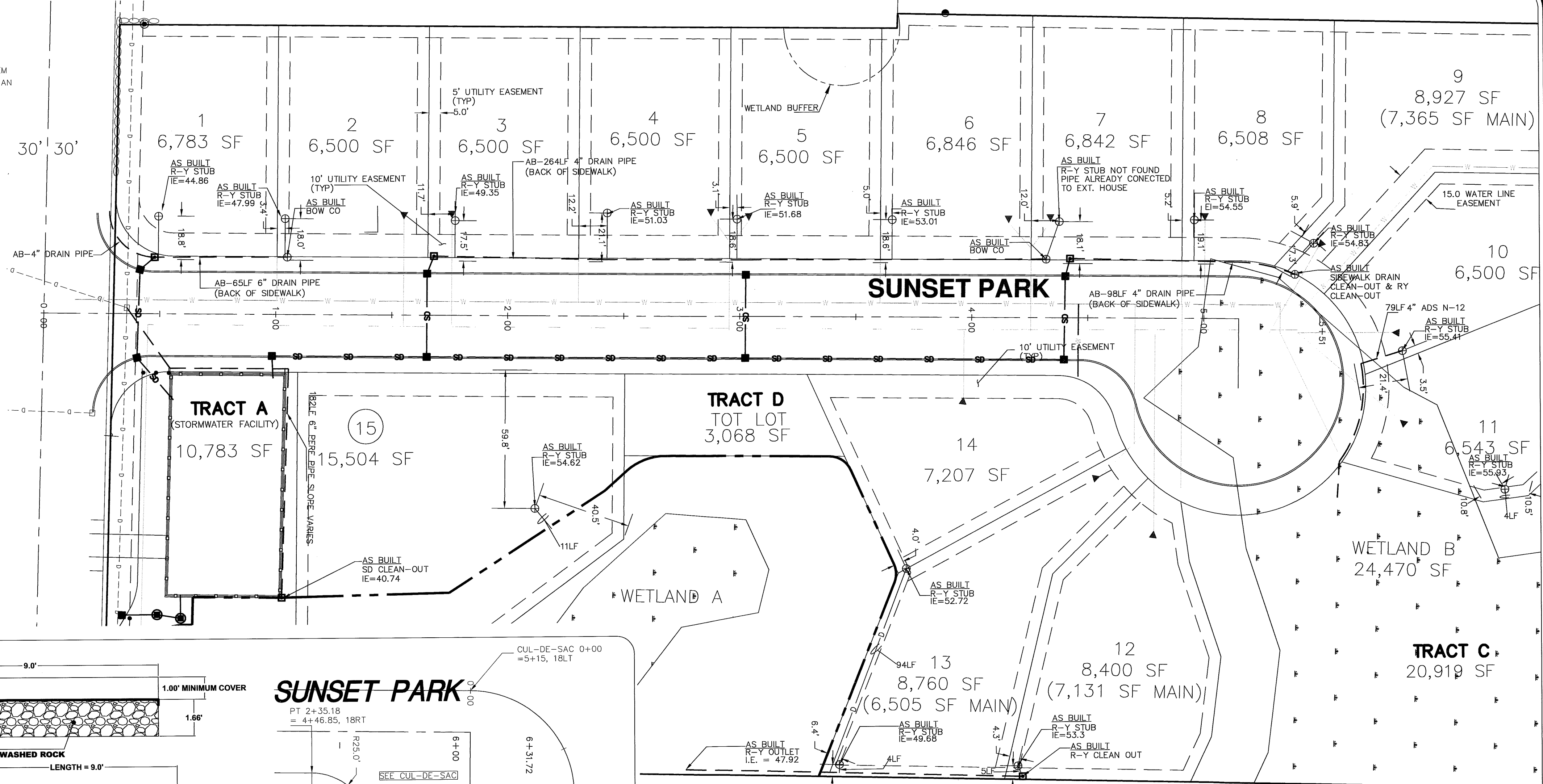


INFILTRATION BED FOR LOTS 3-15 NTS

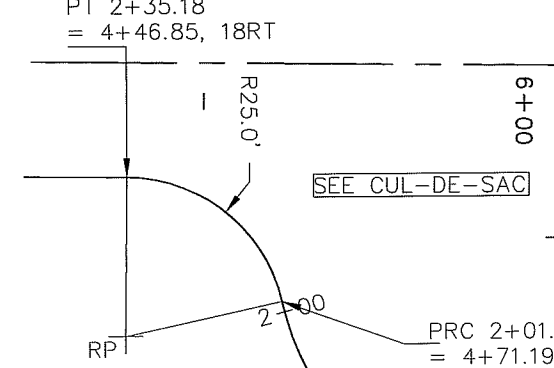
*NOTE
LENGTH AND WIDTH VARY DEPENDING ON THE SIZE OF IMPERVIOUS SURFACE CONTAINED ON EACH LOT. SEE TABLE BELOW FOR FACILITY SIZING

INFILTRATION FACILITY TO BE LOCATED OUTSIDE ROAD PRISM
ALL INFILTRATION SYSTEMS SHOULD BE AT LEAST 10 FEET FROM ANY STRUCTURE, PROPERTY LINE, OR SENSITIVE AREA (EXCEPT STEEP SLOPES).

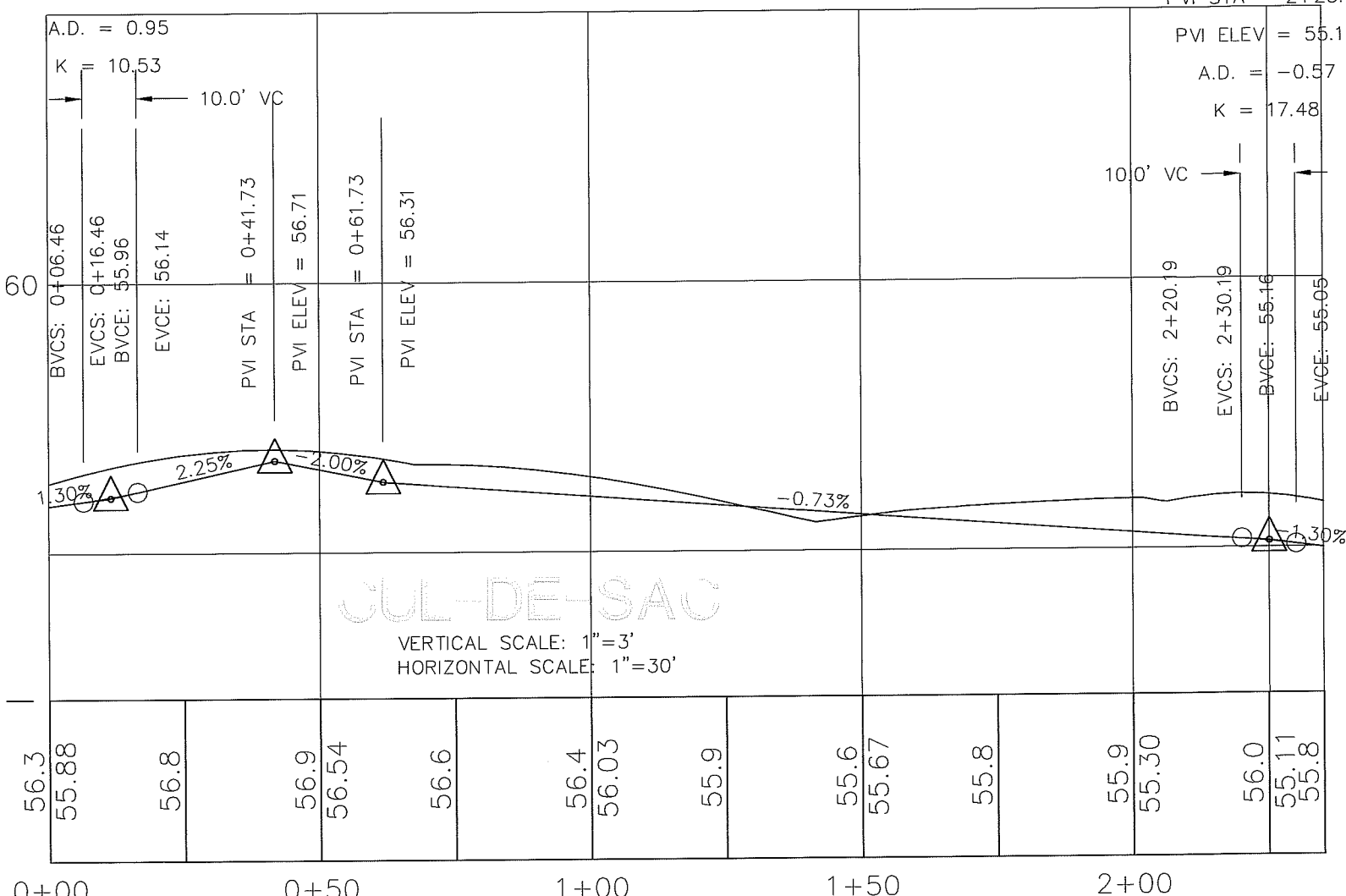
ROOF AREA (SQ FEET)	LENGTH (FEET)	WIDTH (FEET)	DEPTH (FEET)	INFILTRATION BED FOOTPRINT AREA
1000	9	9	1.66	81
1500	11	11	1.66	121
2000	13	13	1.66	169
2500	14.5	14.5	1.66	210.25
3000	16	16	1.66	256
3500	17	17	1.66	289
4000	18.5	18.5	1.66	342.25
4500	19.5	19.5	1.66	380.25



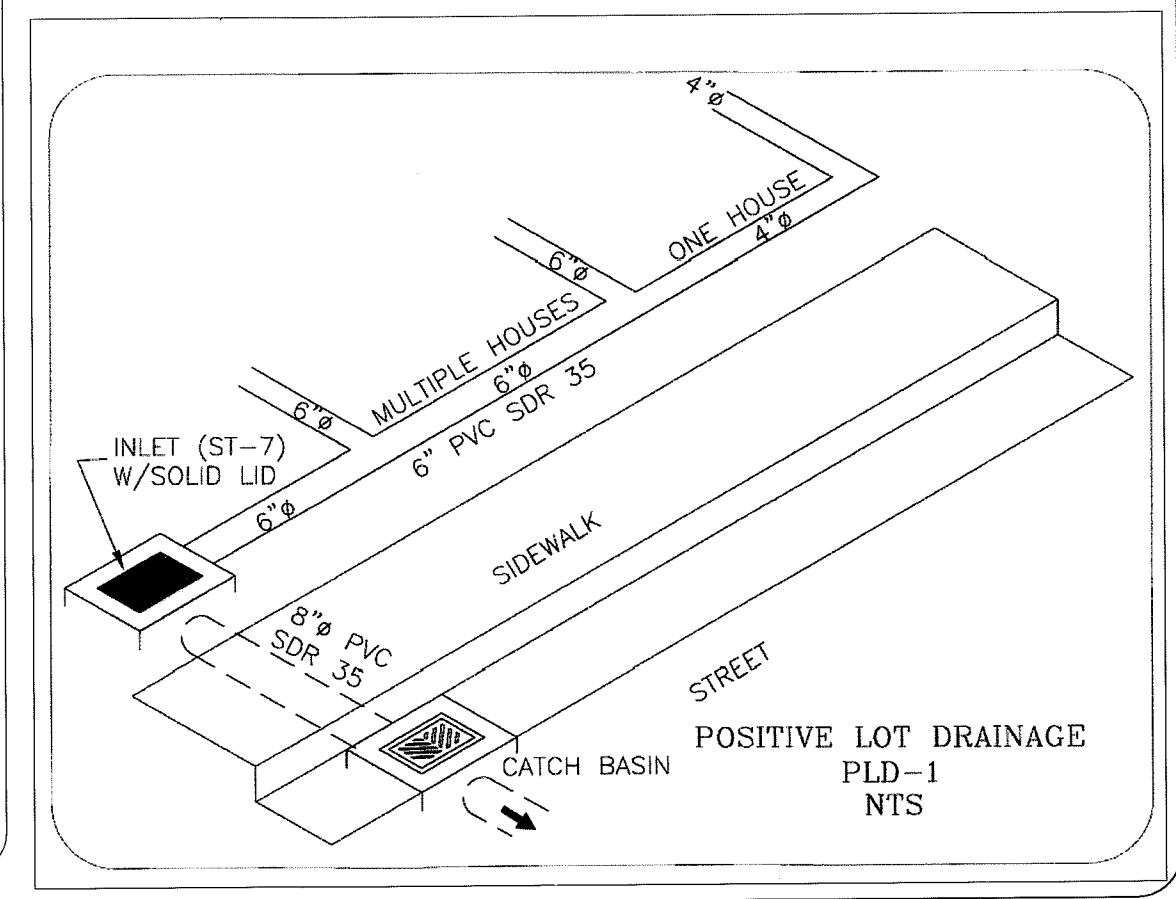
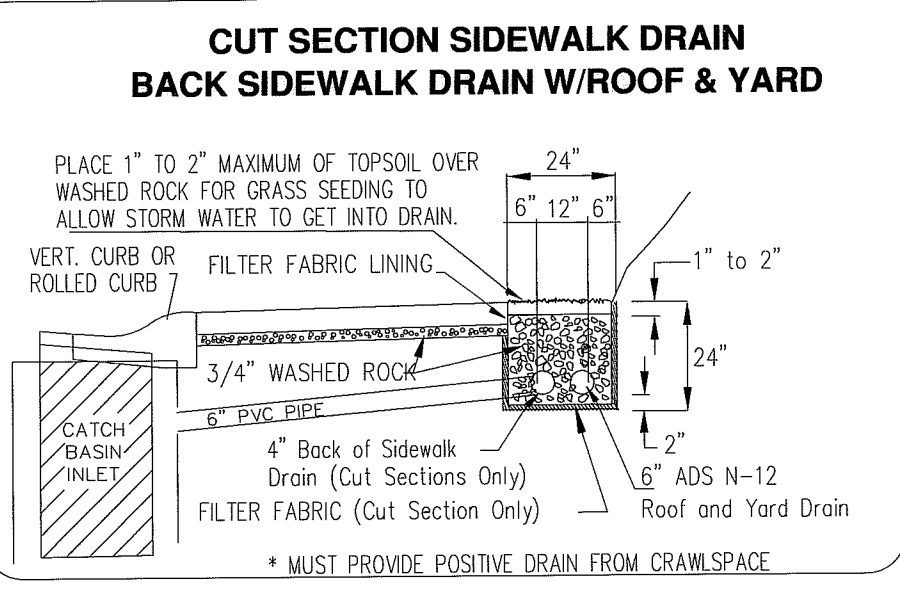
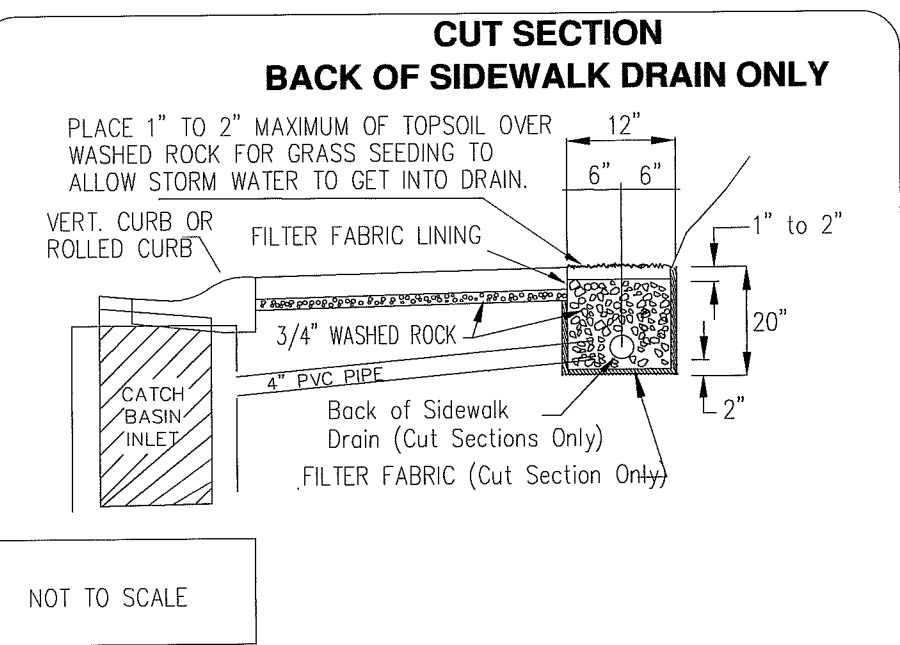
SUNSET PARK



PVI STA = 0+11.46
PVI ELEV = 56.03



CUL-DE-SAC
VERTICAL SCALE: 1"=3'
HORIZONTAL SCALE: 1"=30'



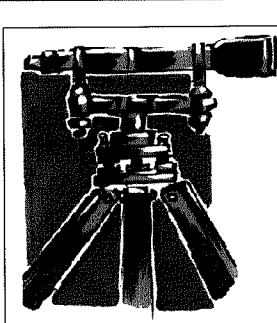
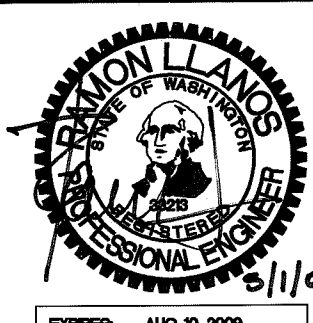
DRAWN BY SR DATE 5/1/2009

CHECKED BY RL DATE 5/1/2009

SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC



LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

SUNSET PARK PLAT ROOF & YARD PLAN & CURB WARPING AS-BUILT DESIGN

REVISIONS	NTALS/DATE/COMMENTS
SR 6/18/2008	SUBMITTAL #1
SR 12/23/2008	SUBMITTAL #2
SR 4/16/2009	SUBMITTAL #3
SR 05/01/2009	ADDED R-Y STUBS INVERTS

SHEET

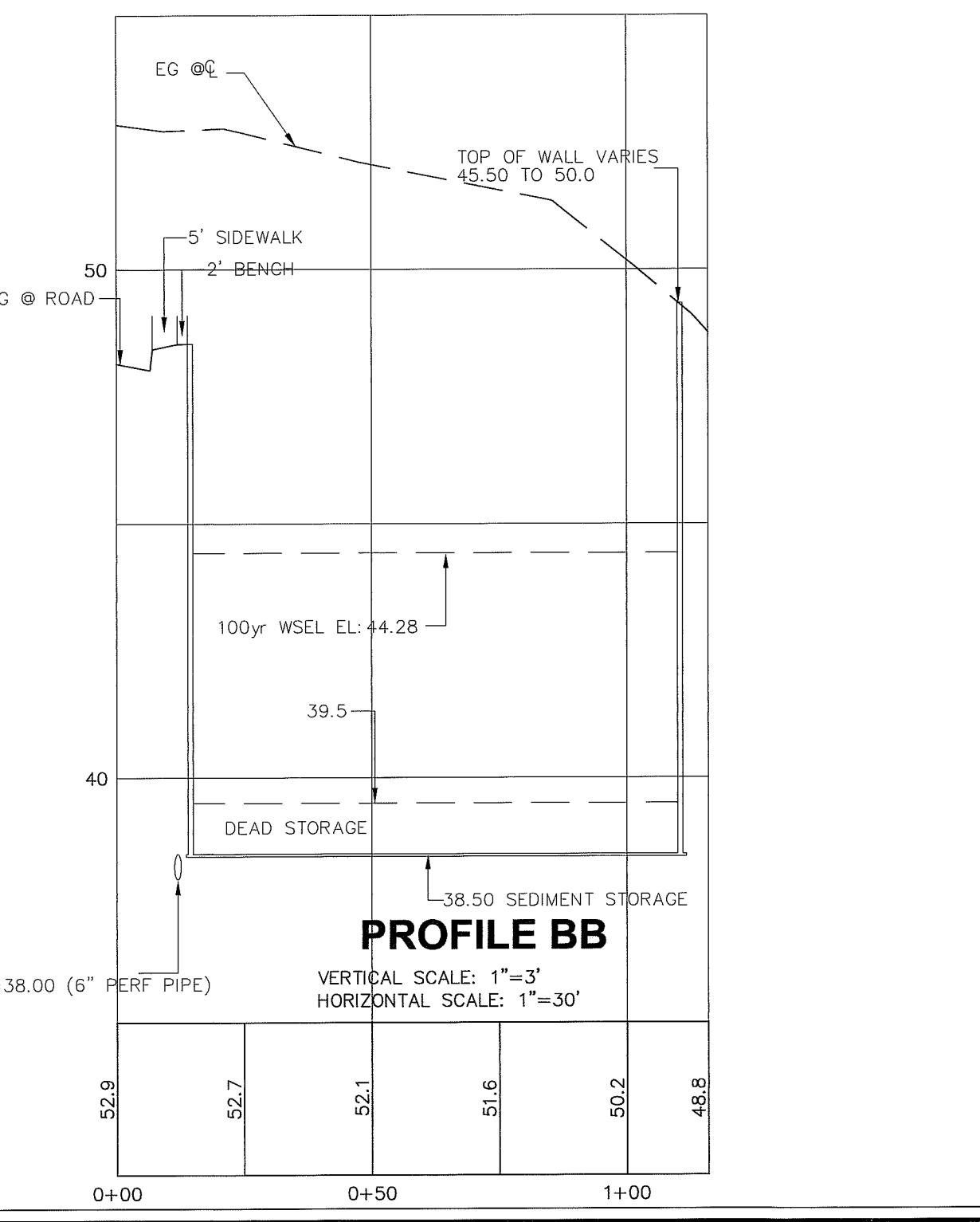
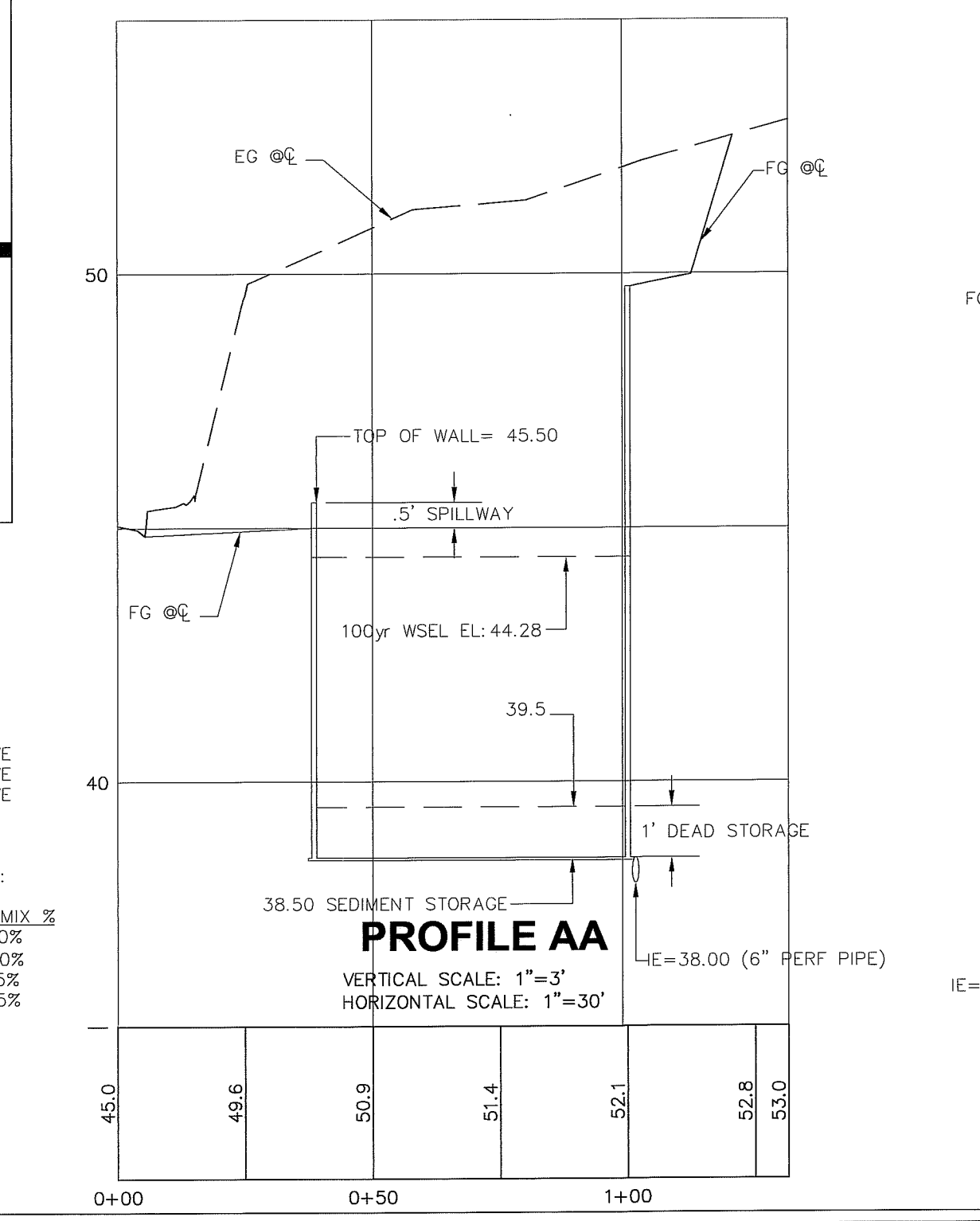
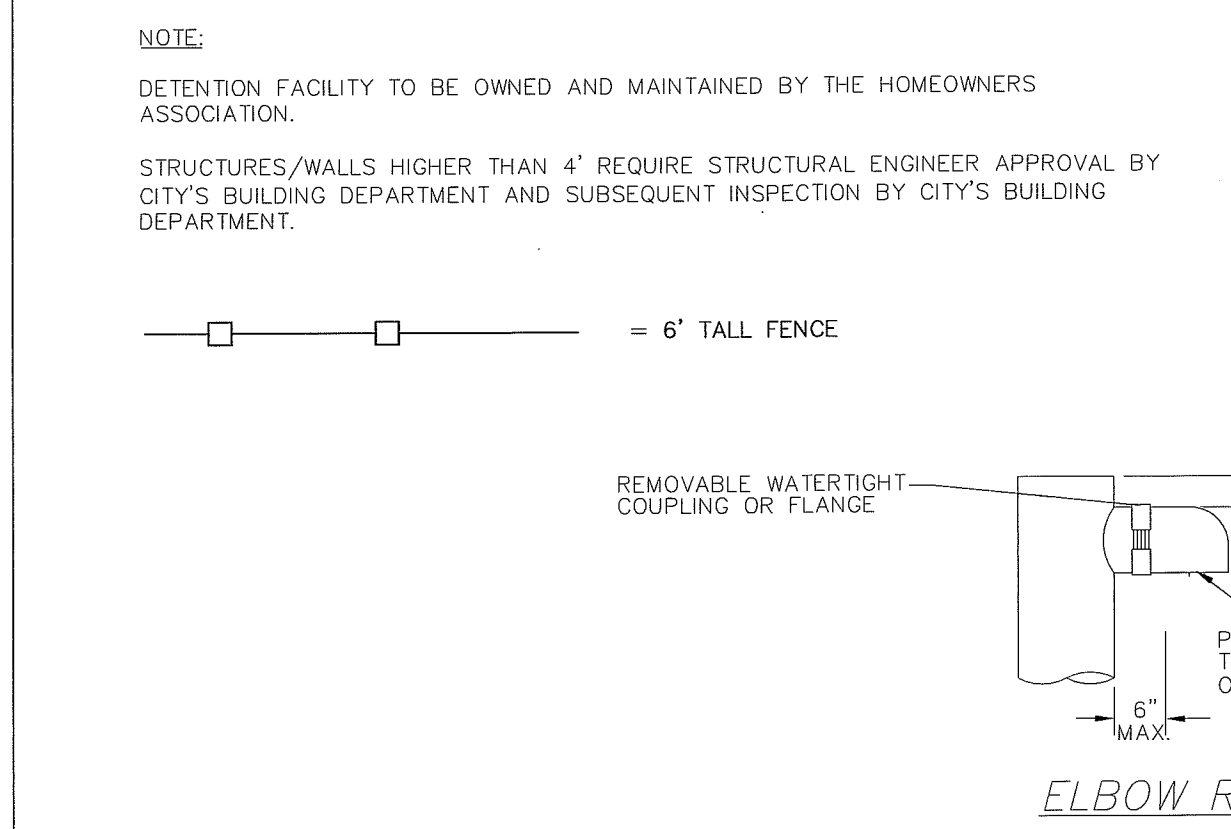
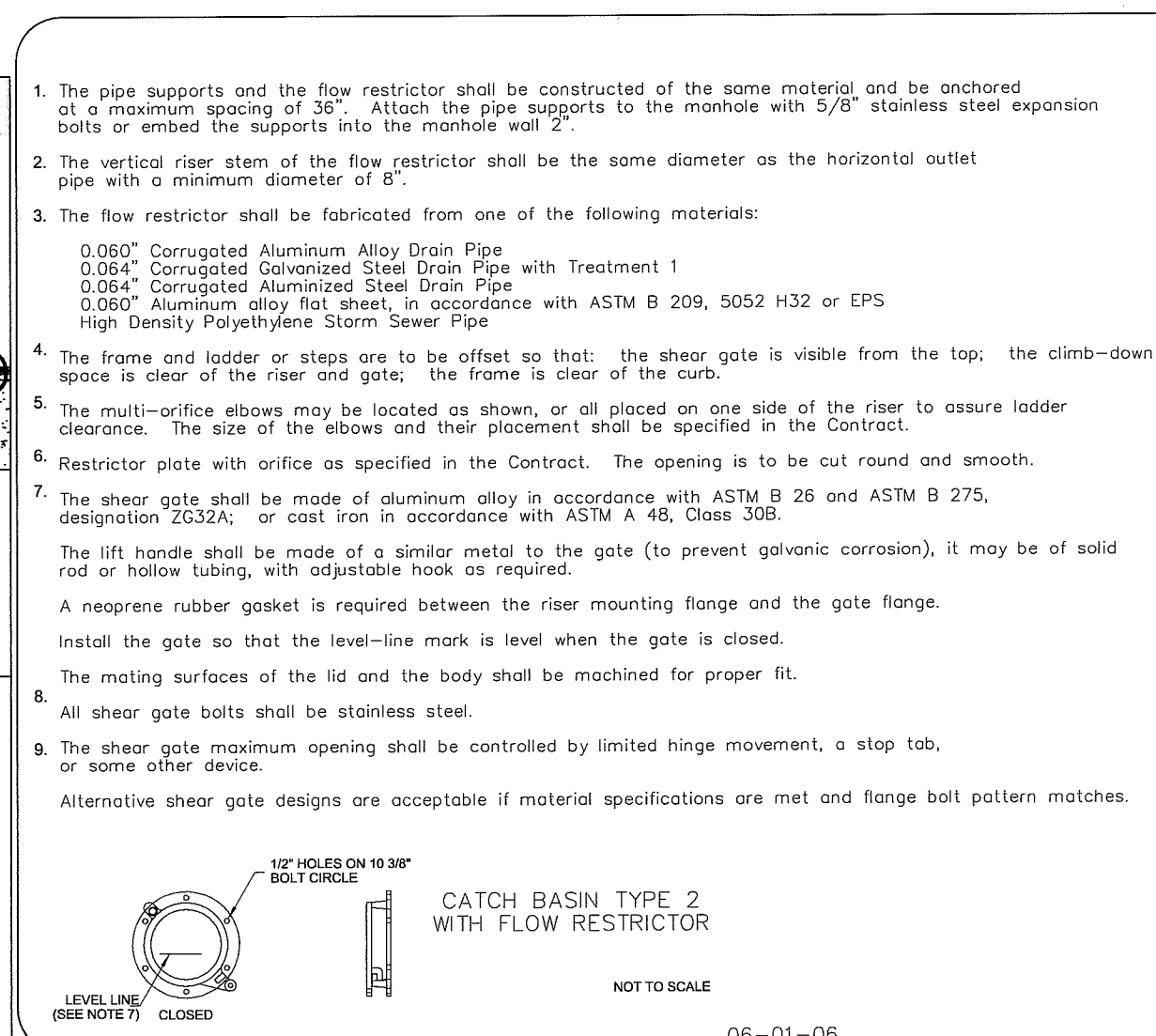
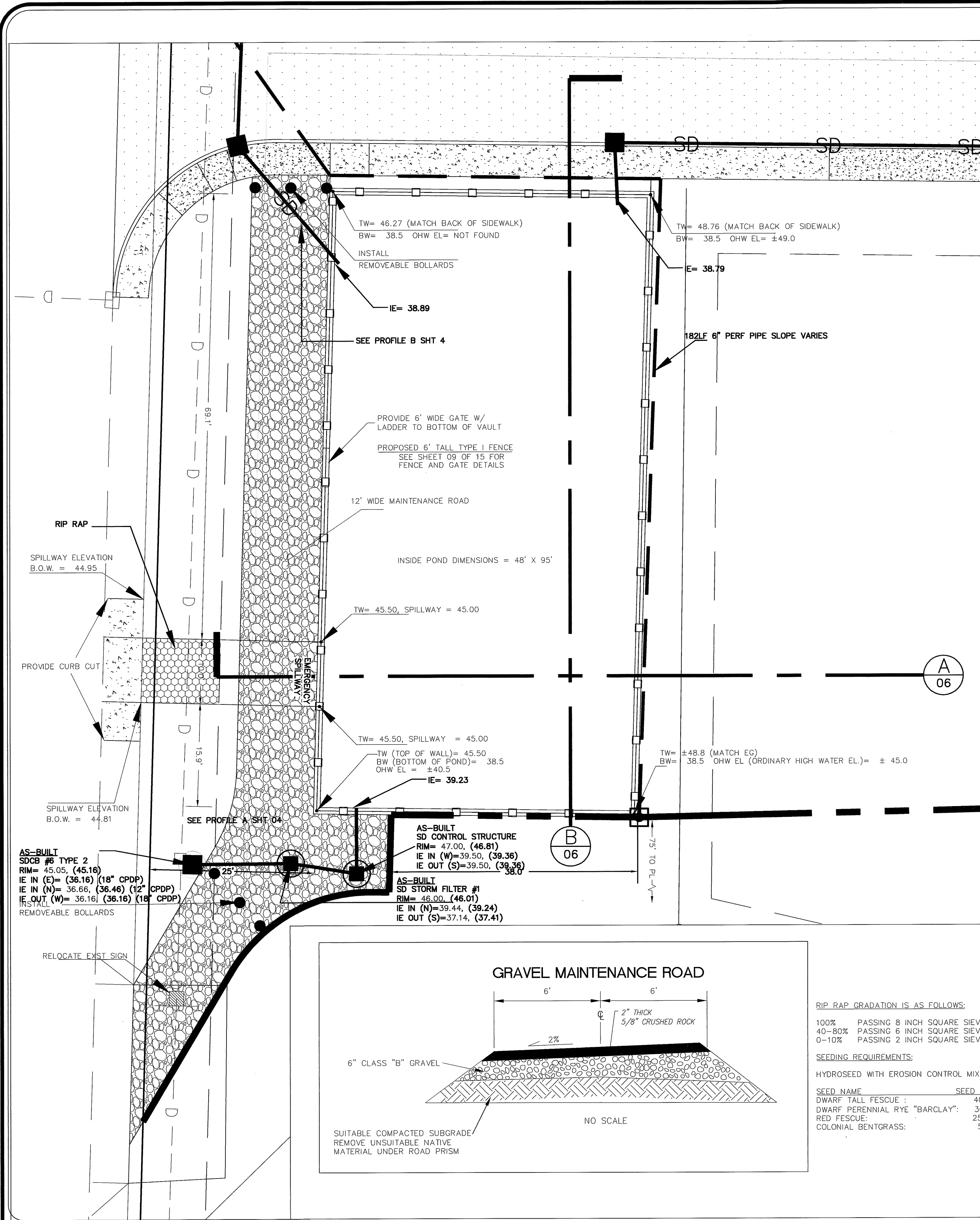
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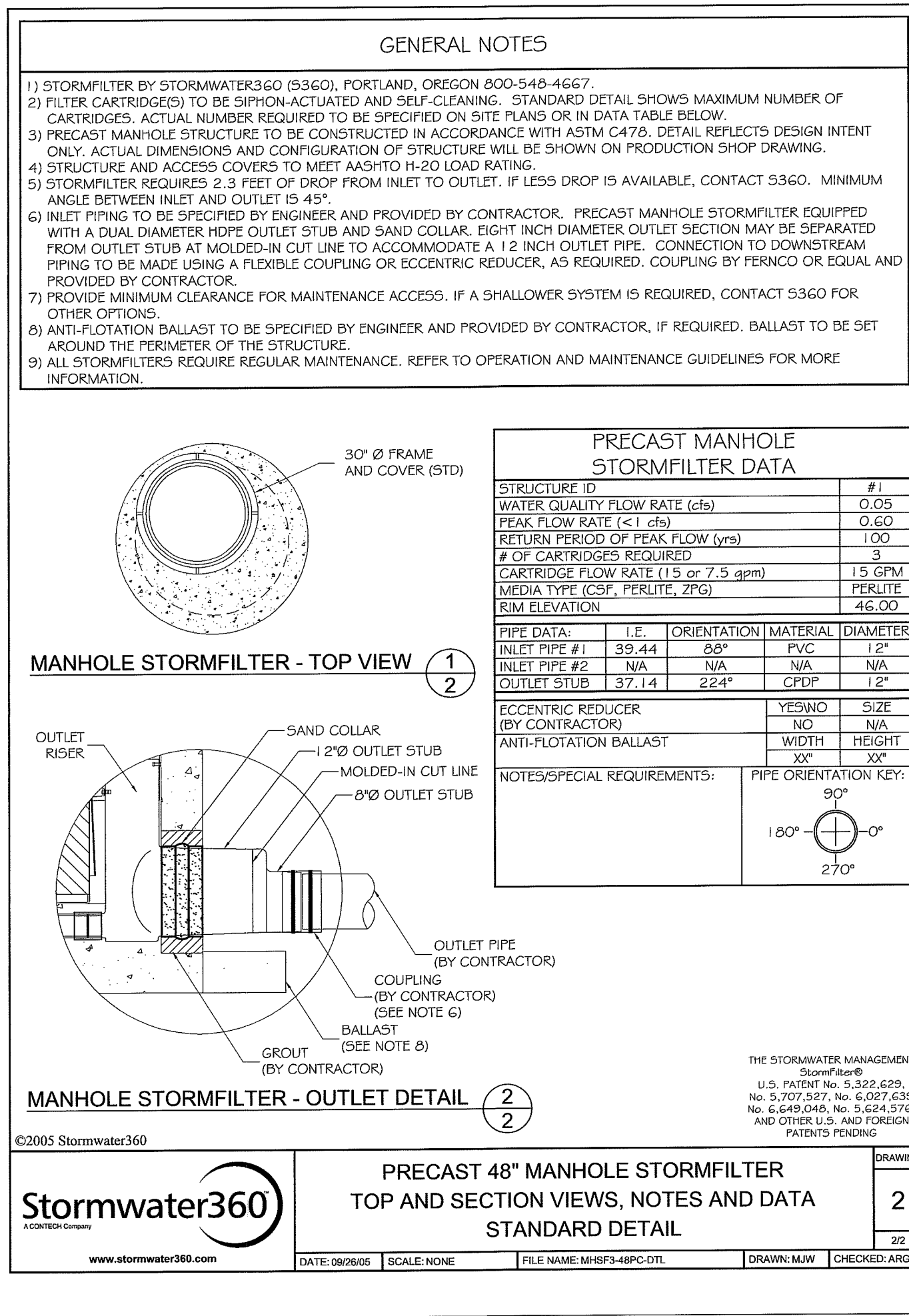
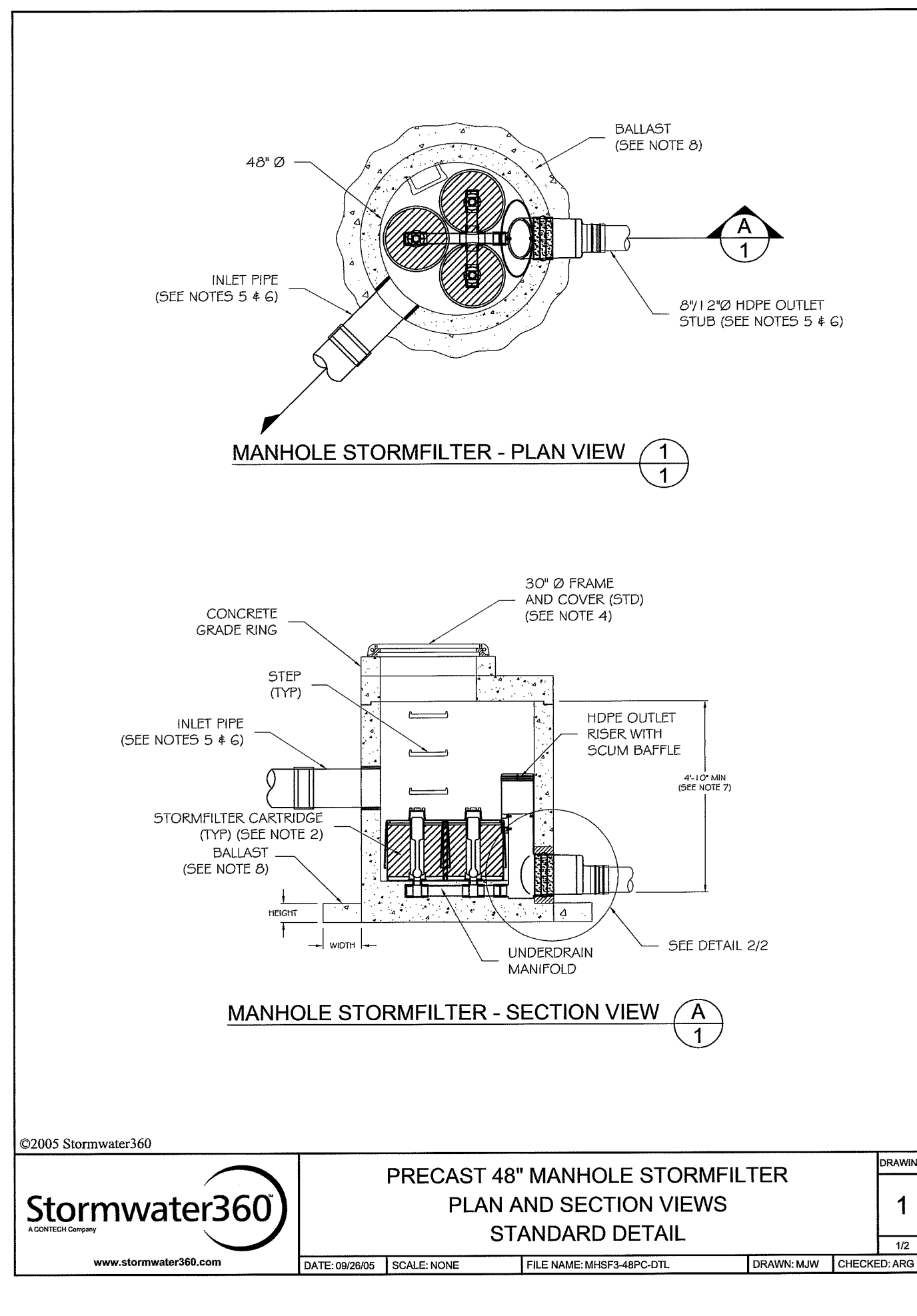
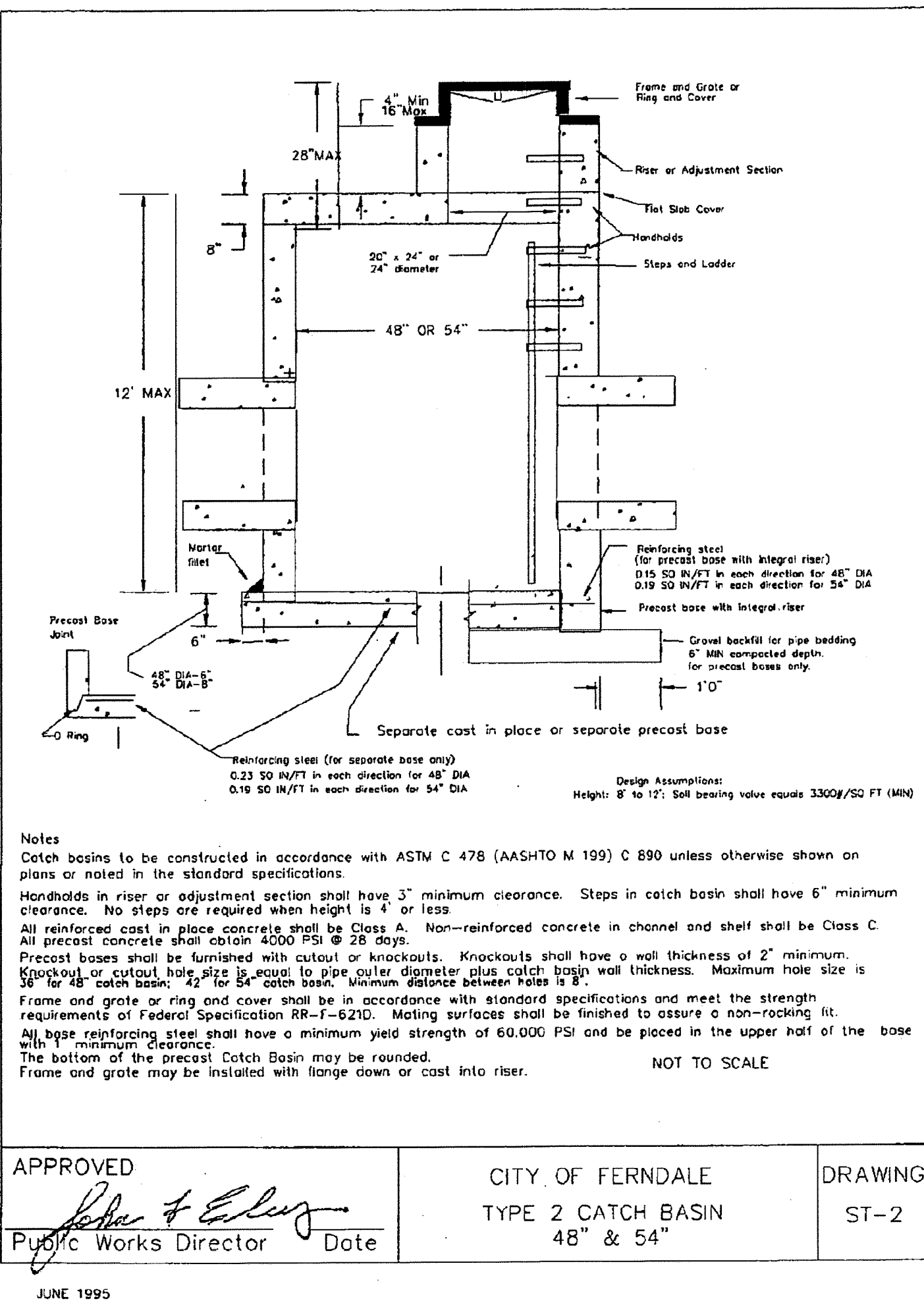
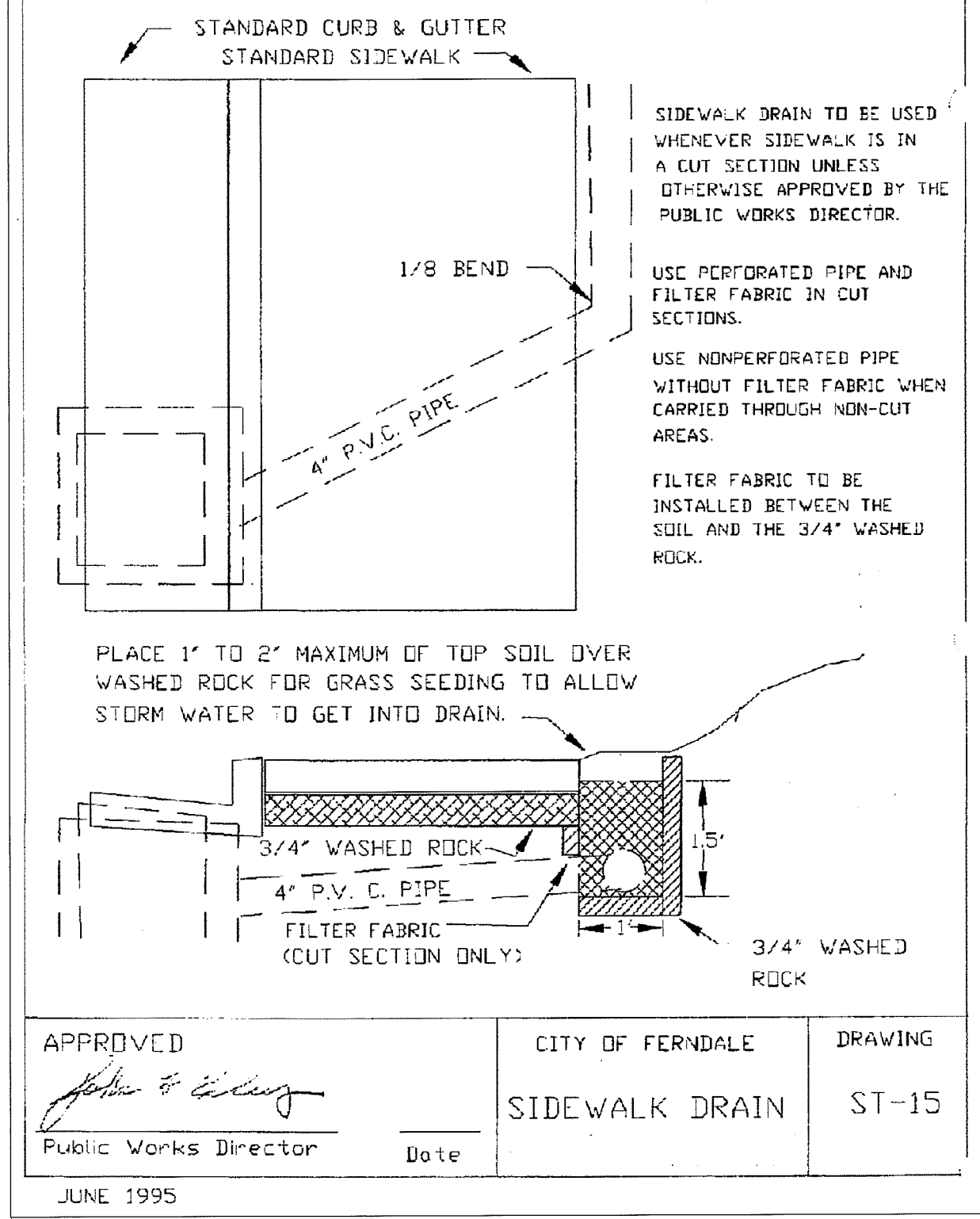
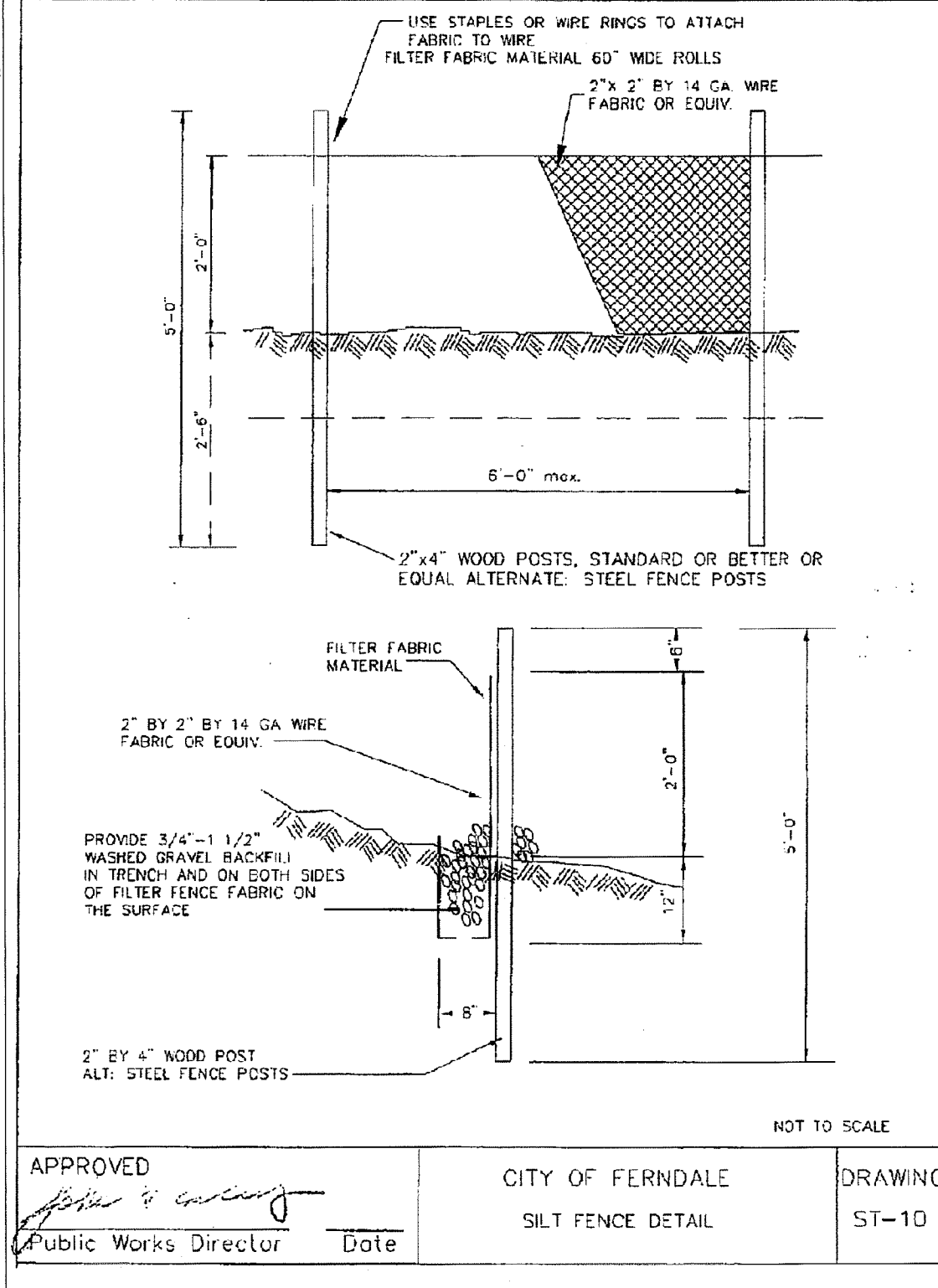
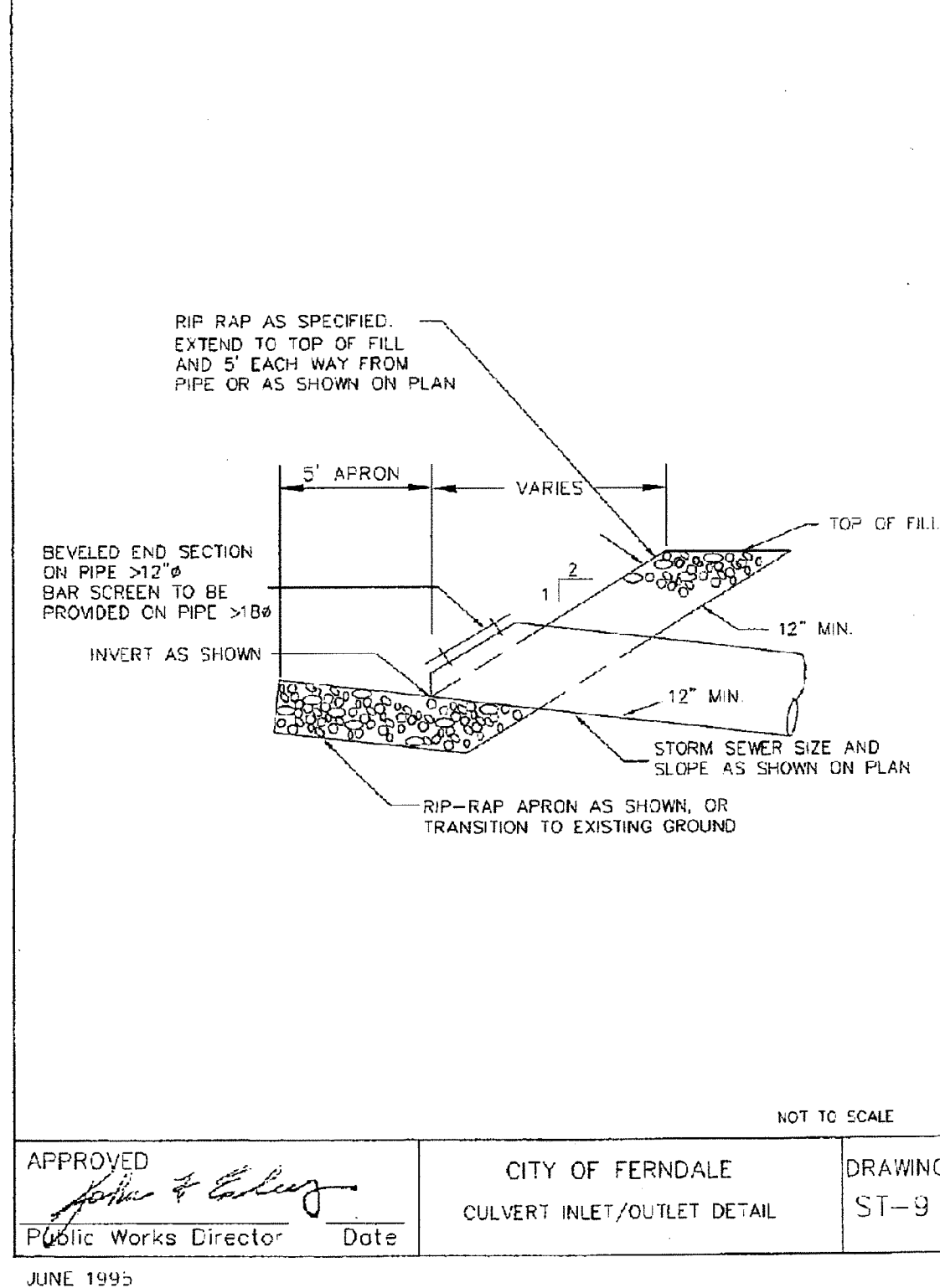
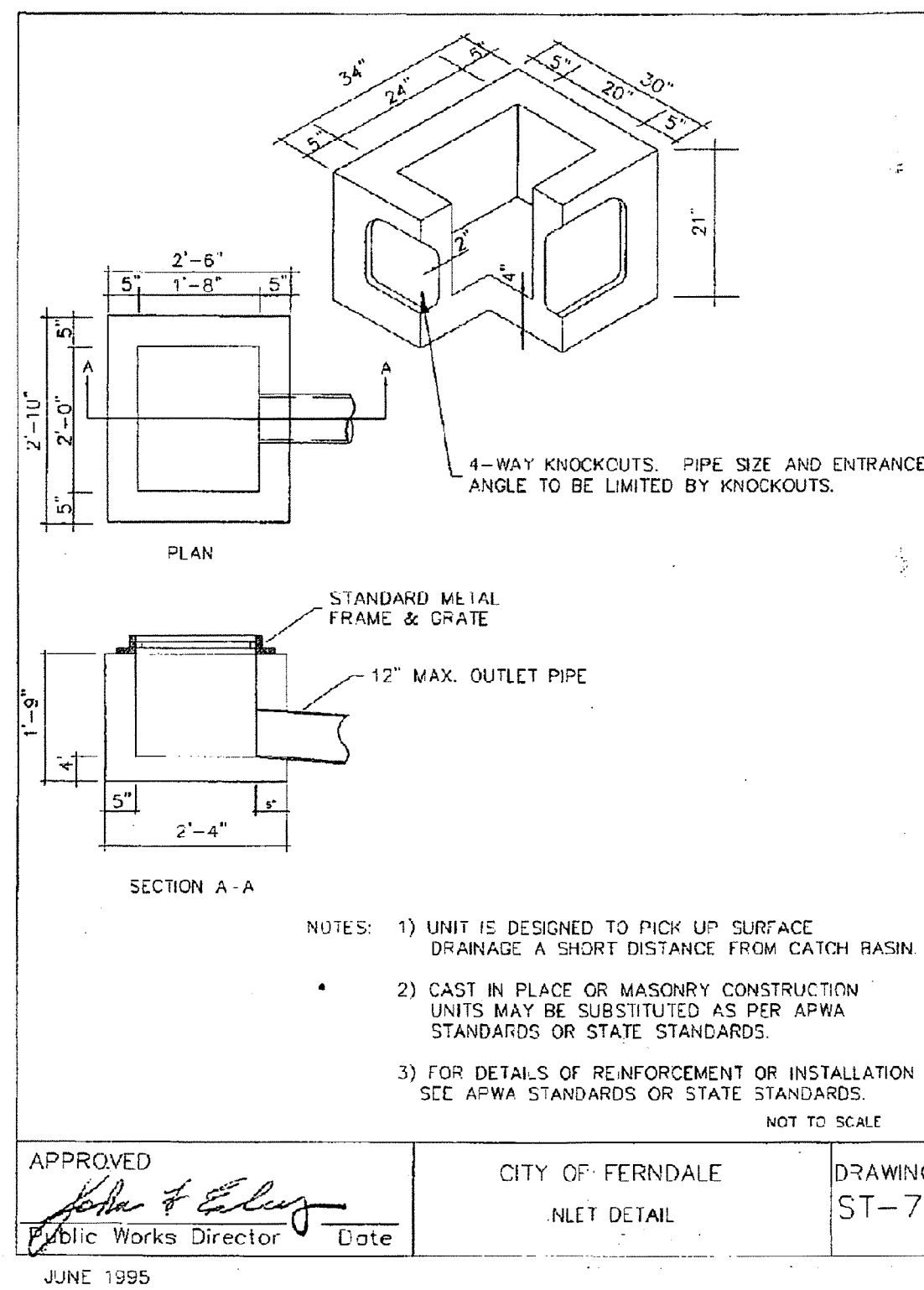
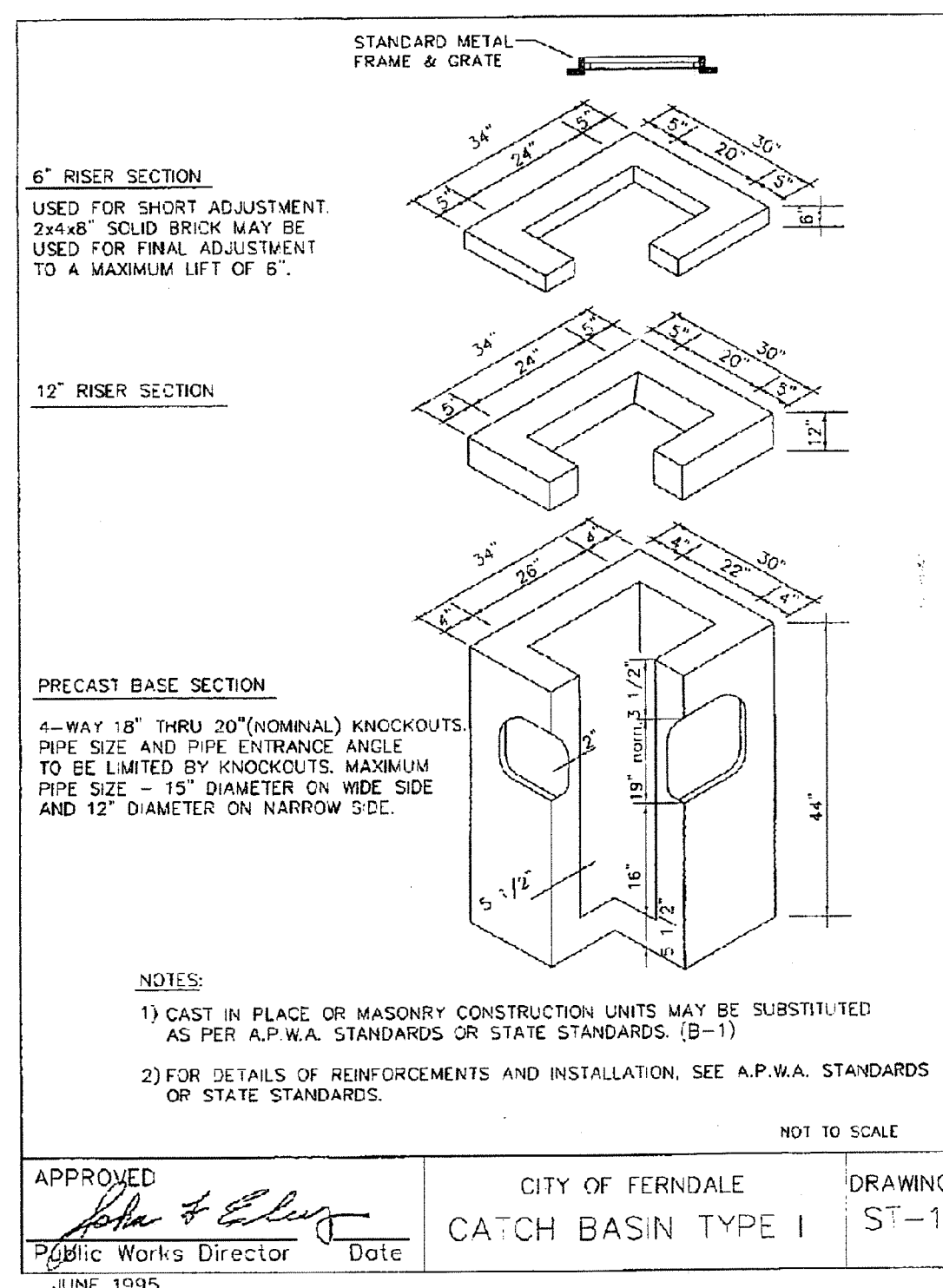
OF

14

00386.005 7-9-09 D

BY
CITY OF FERNDAL





DRAWN BY **SR** DATE 3/10/2009
CHECKED BY **RL** DATE 3/10/2009
JOB # 6057

SUNSET PARK PLAT
FOR: KRAMER CONSTRUCTION, LLC

LD&S, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

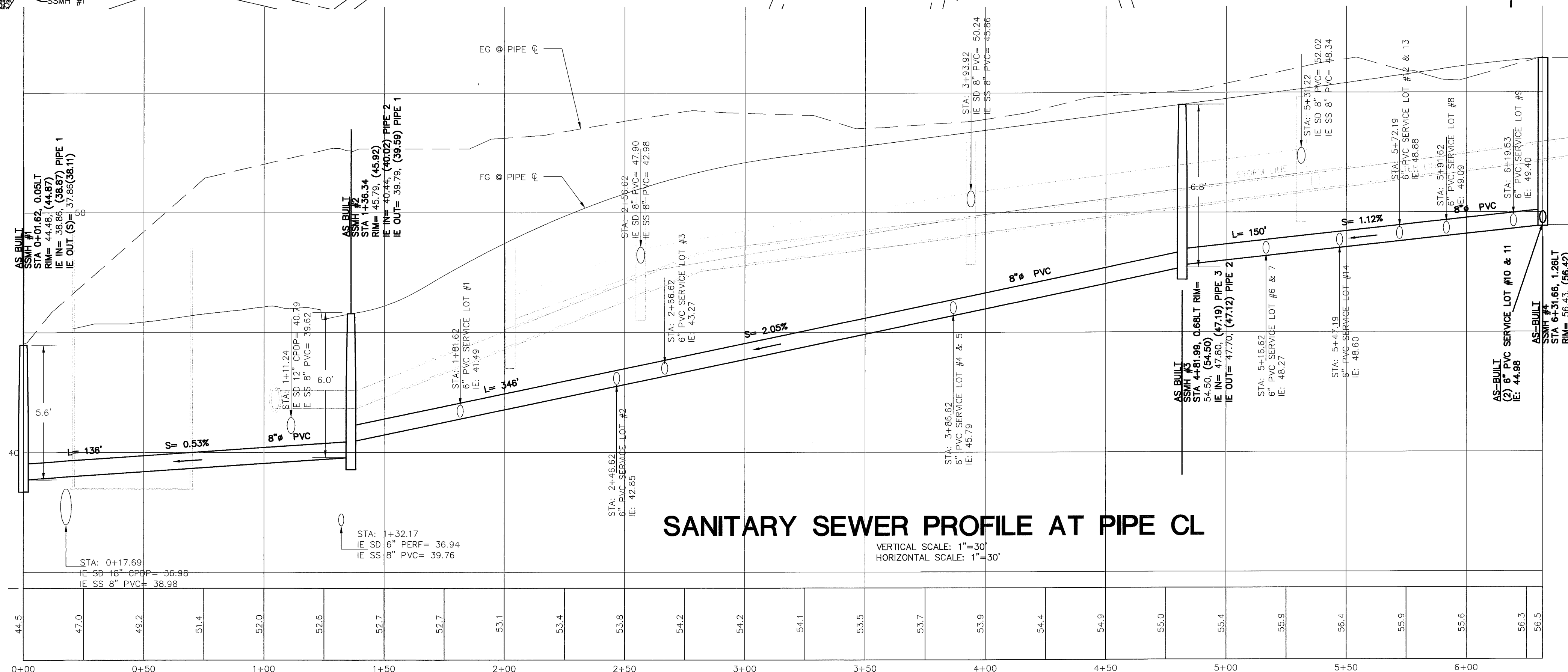
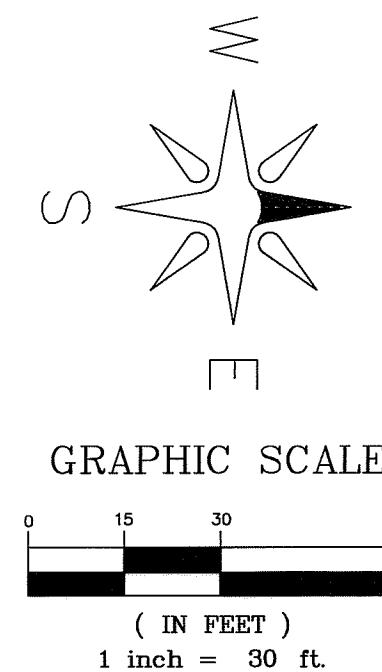
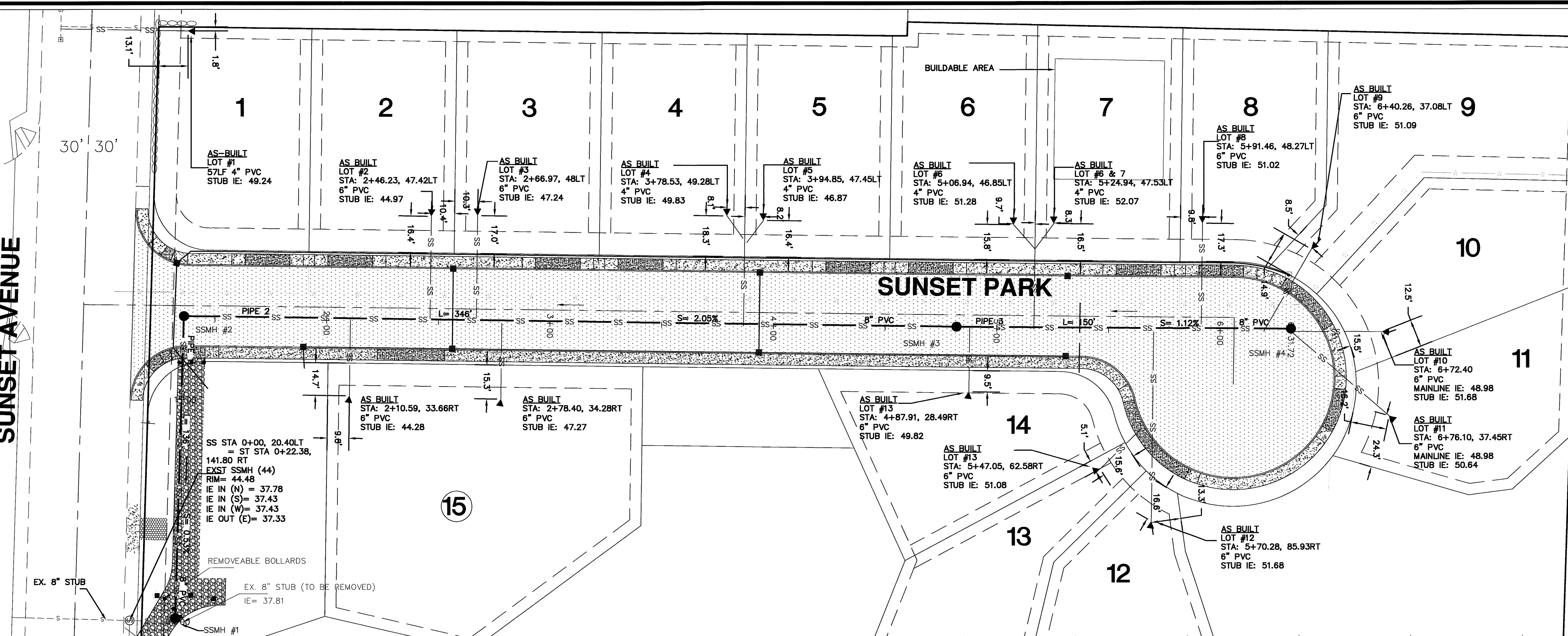
SUNSET PARK PLAT
STREET AND STORM DRAINAGE
DETAILS
RECORD DRAWINGS

REVISIONS - INITIALS/DATE/COMMENTS	
SR	5/30/08 SUBMITTAL #1

07
OF

14

SUNSET AVENUE



SANITARY SEWER PROFILE AT PIPE CL

VERTICAL SCALE: 1"=30'
HORIZONTAL SCALE: 1"=30'

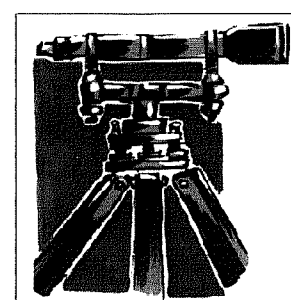
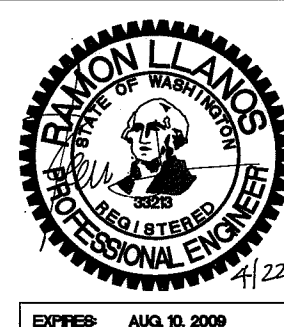
APPROVED
BY: [Signature]
CITY OF FERNDALE

DRAWN BY SR DATE 4/16/2009
CHECKED BY RL DATE 4/16/2009

SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC



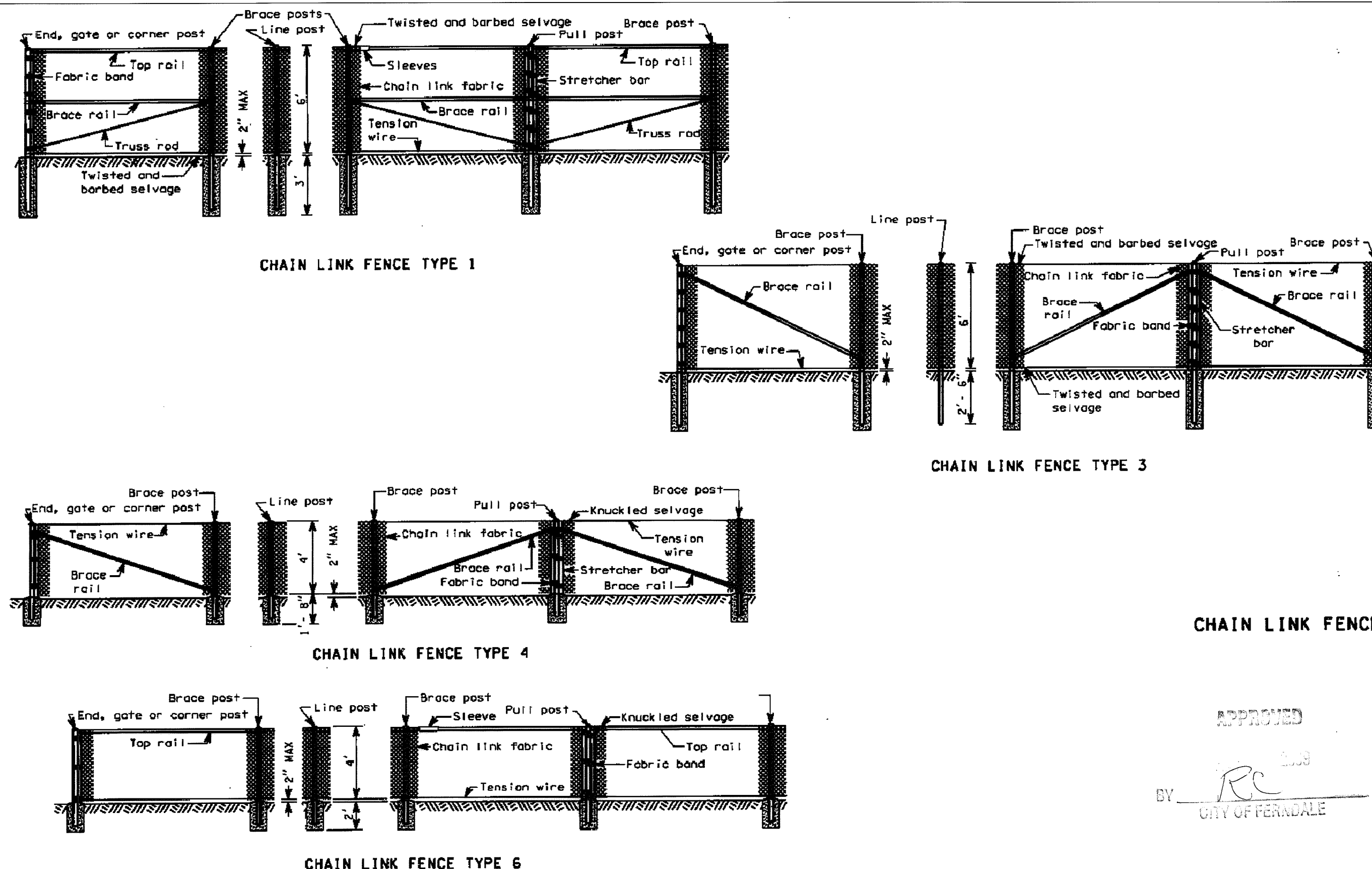
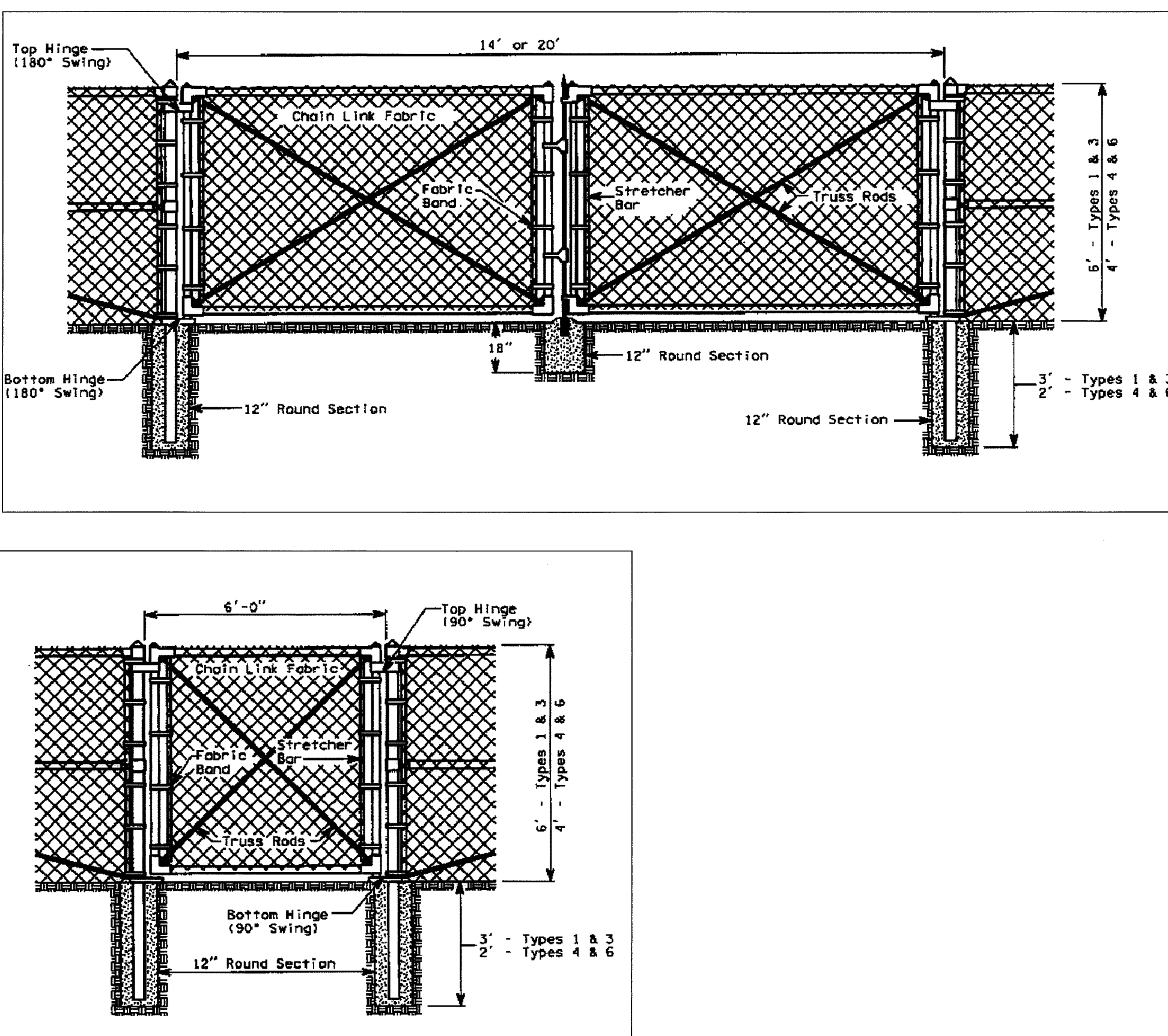
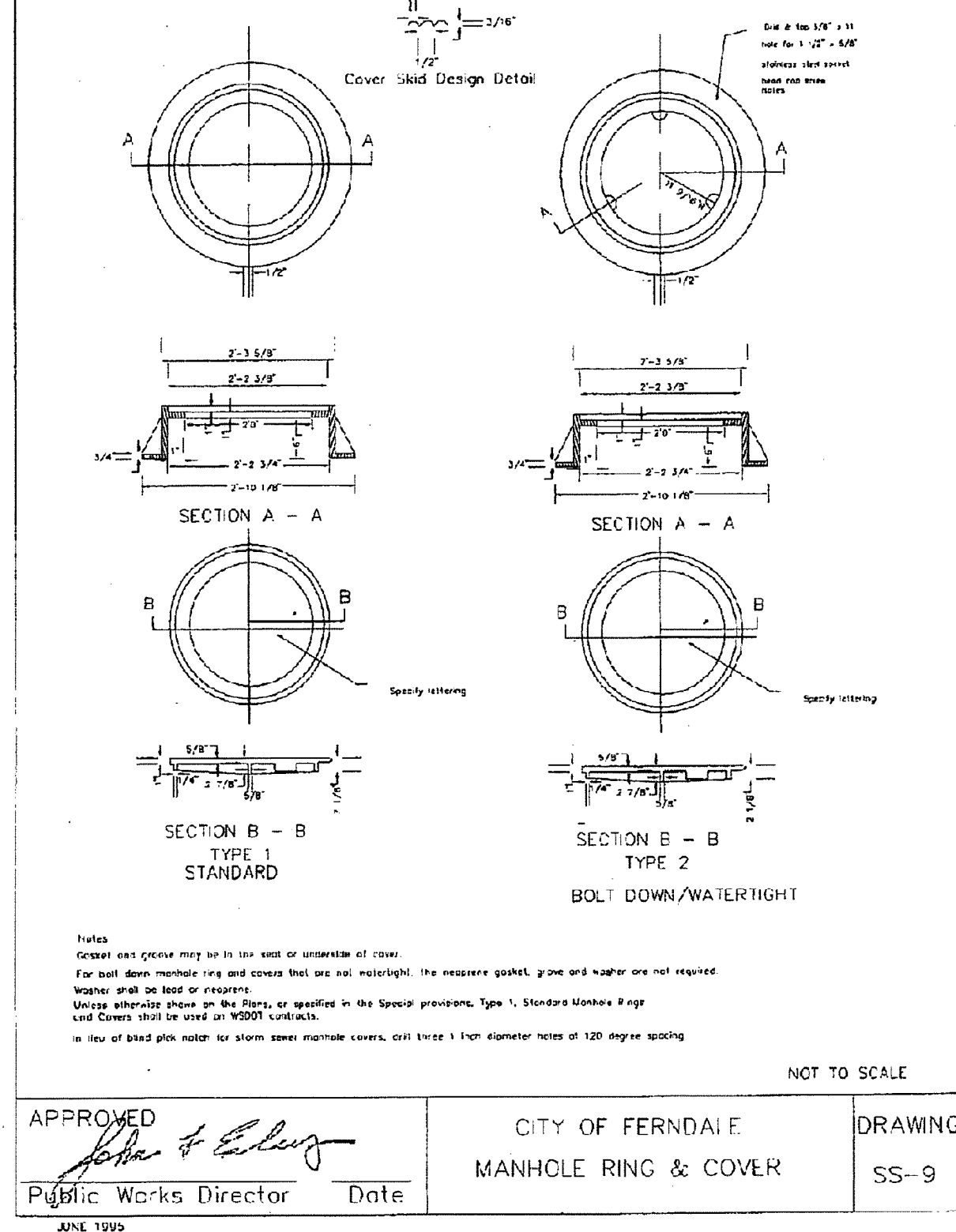
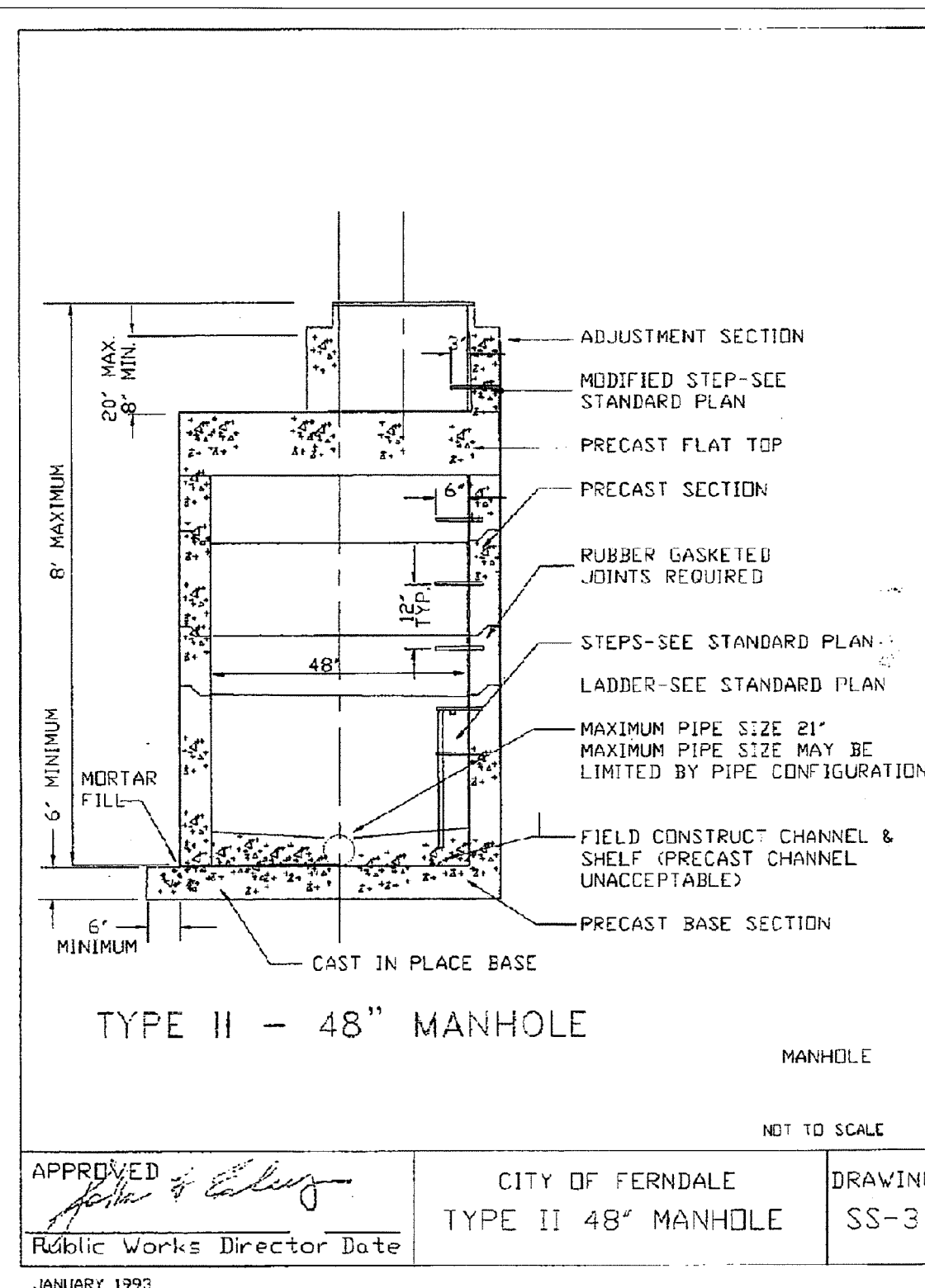
LDES, INC.
5160 INDUSTRIAL PL #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

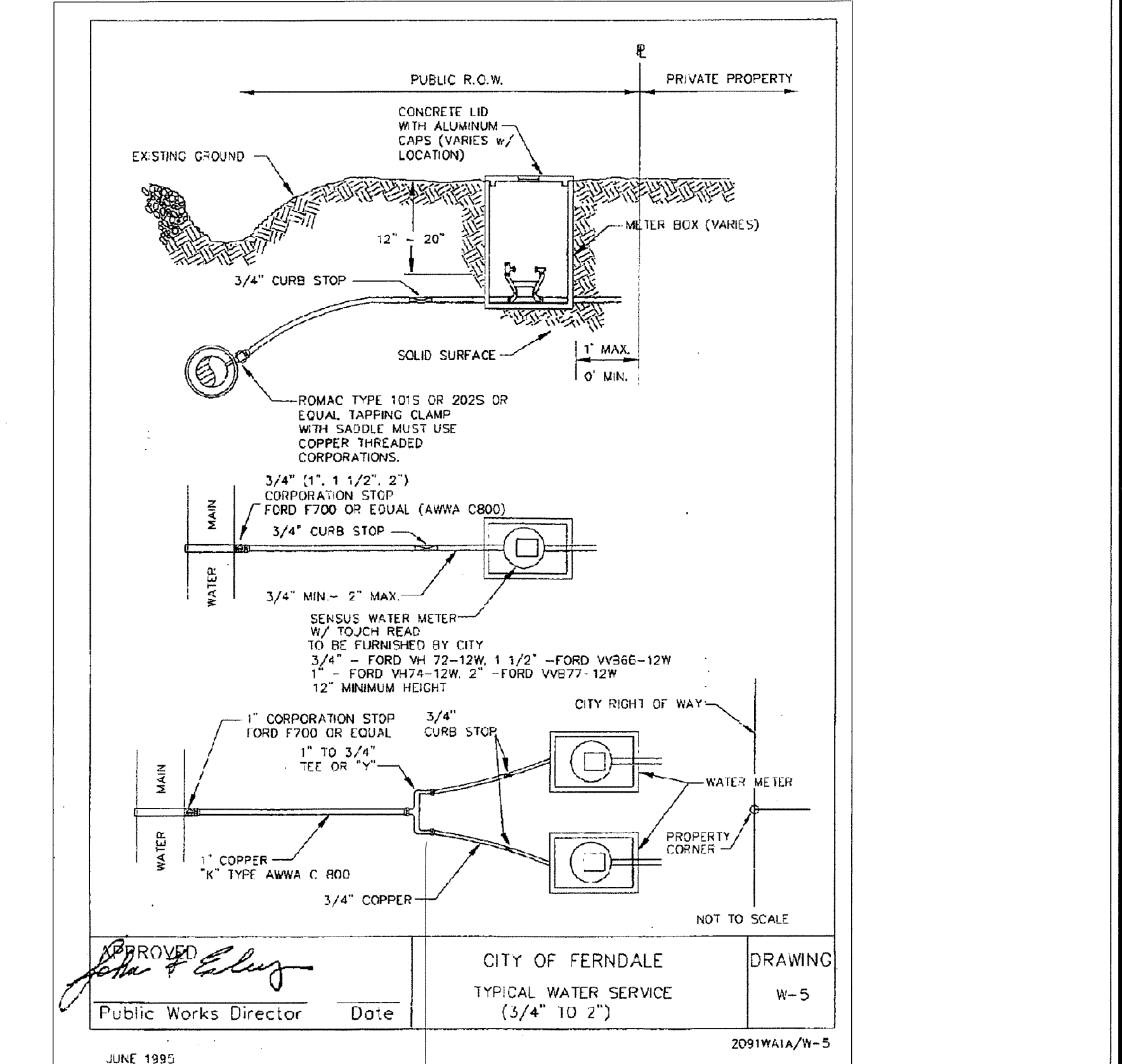
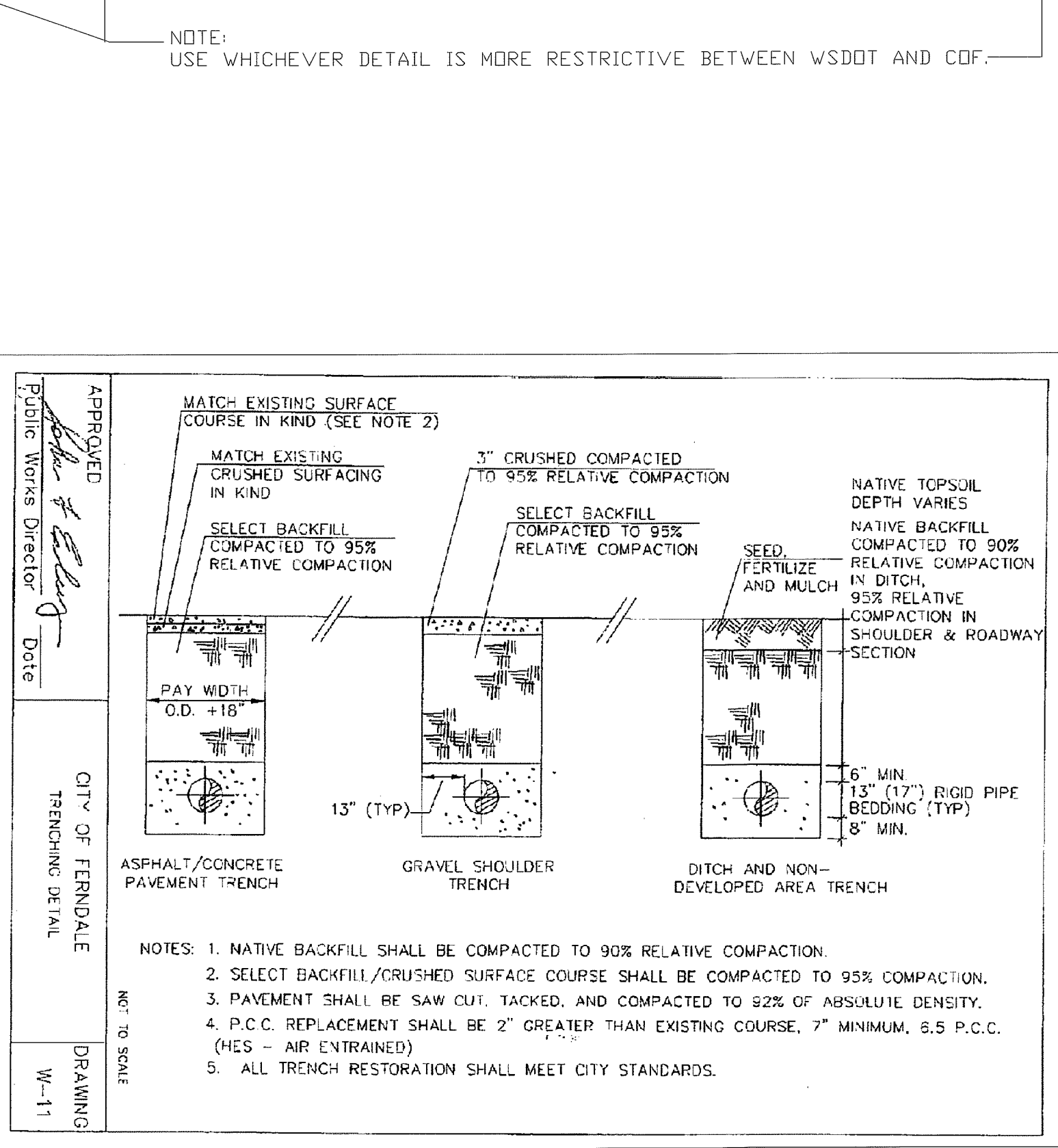
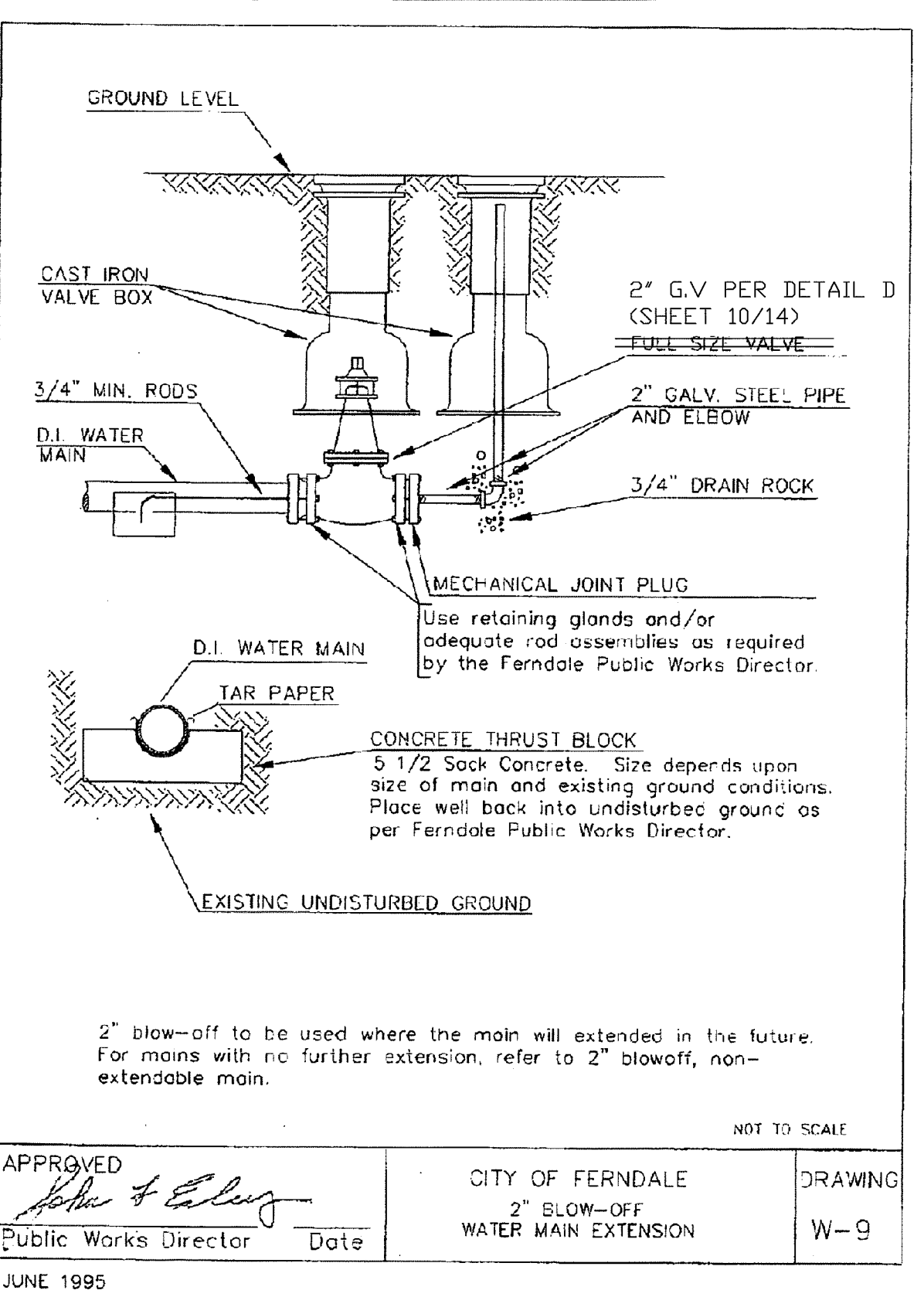
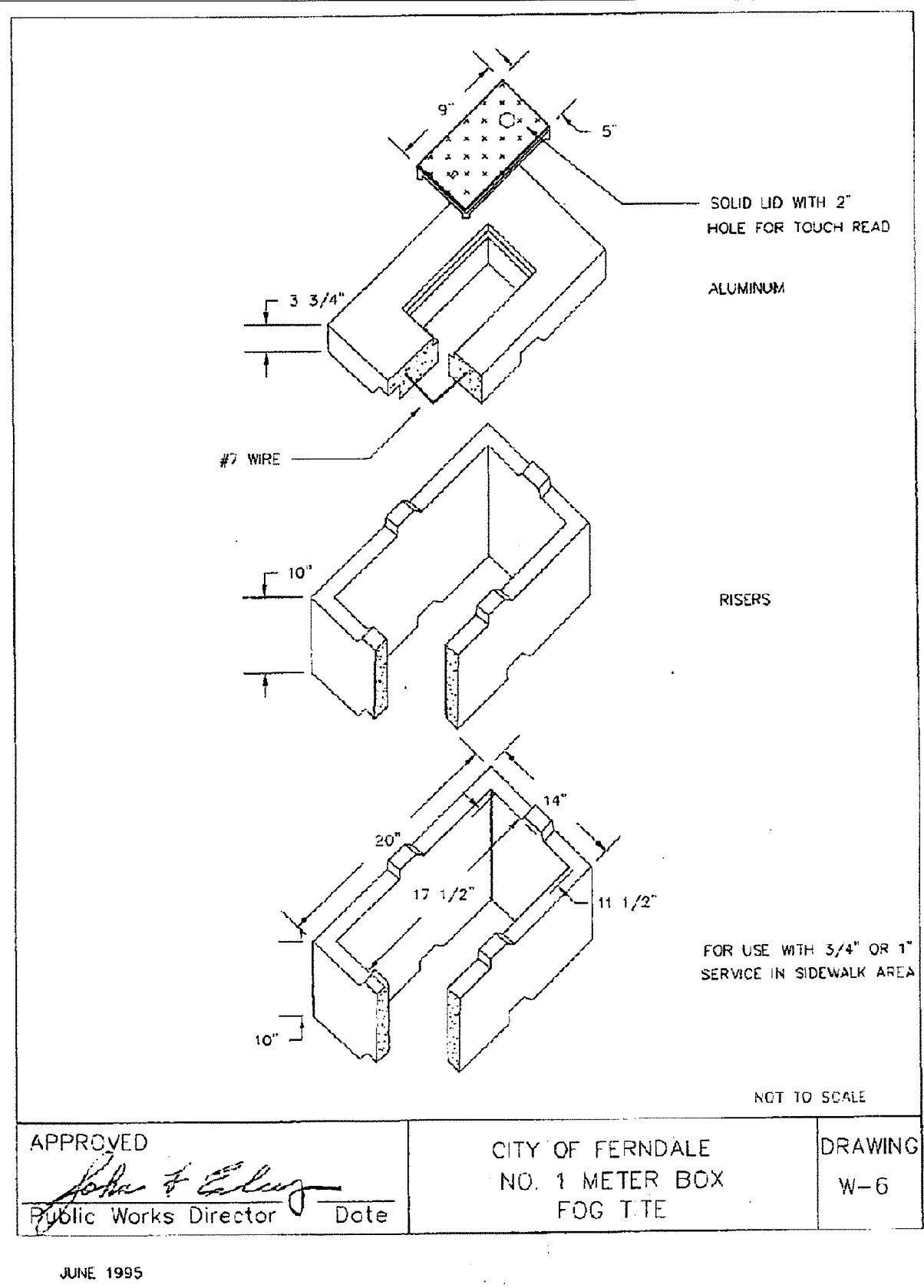
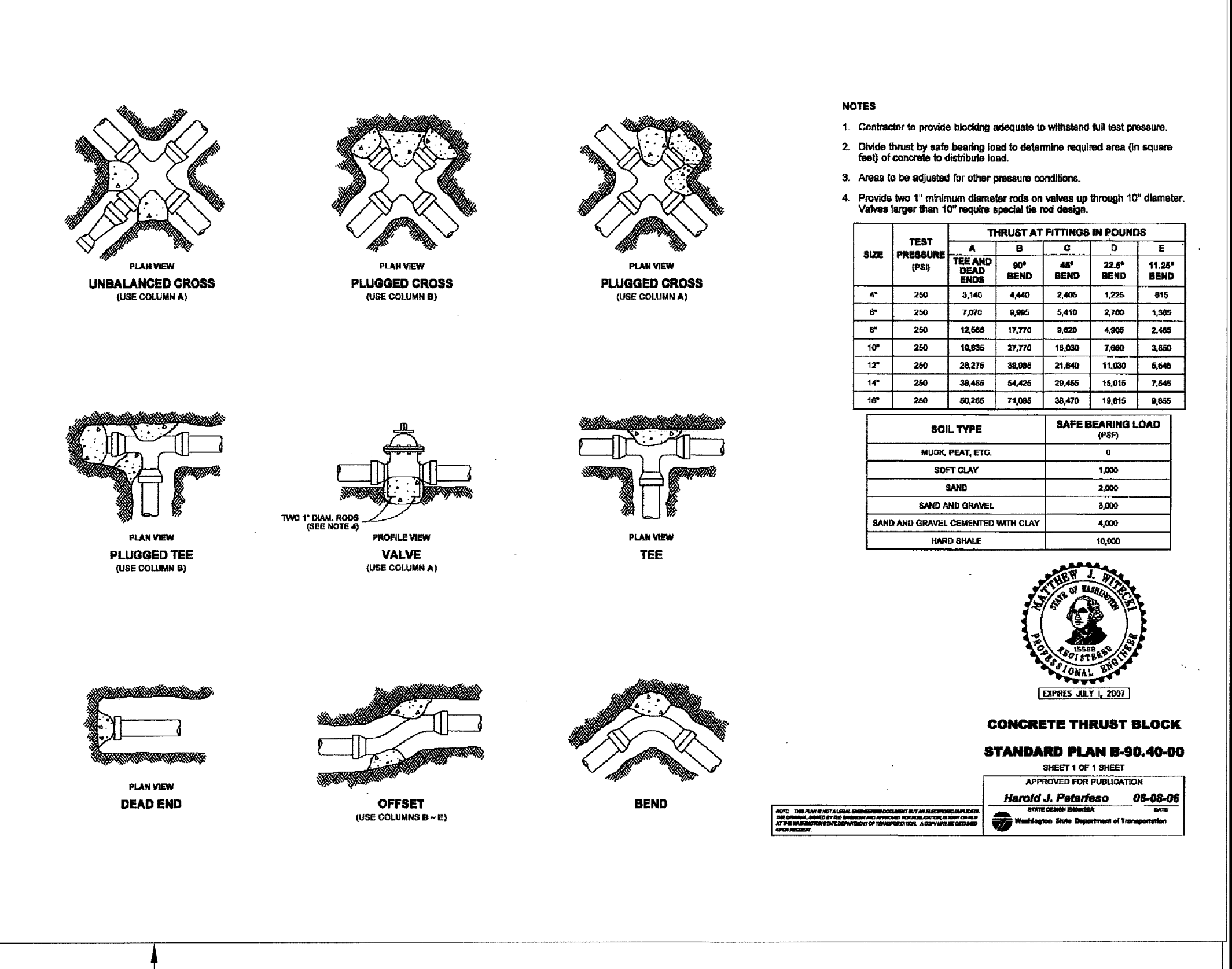
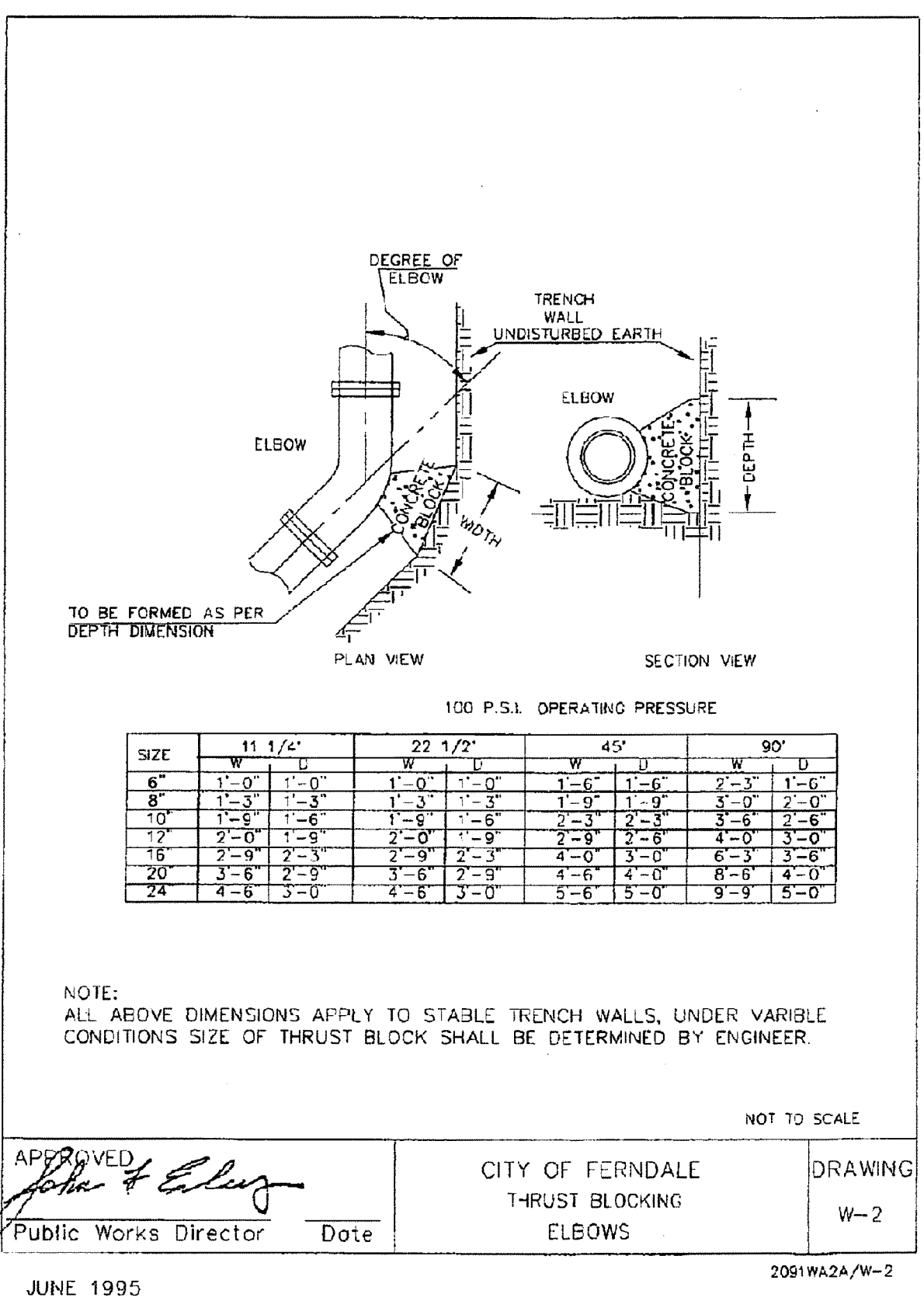
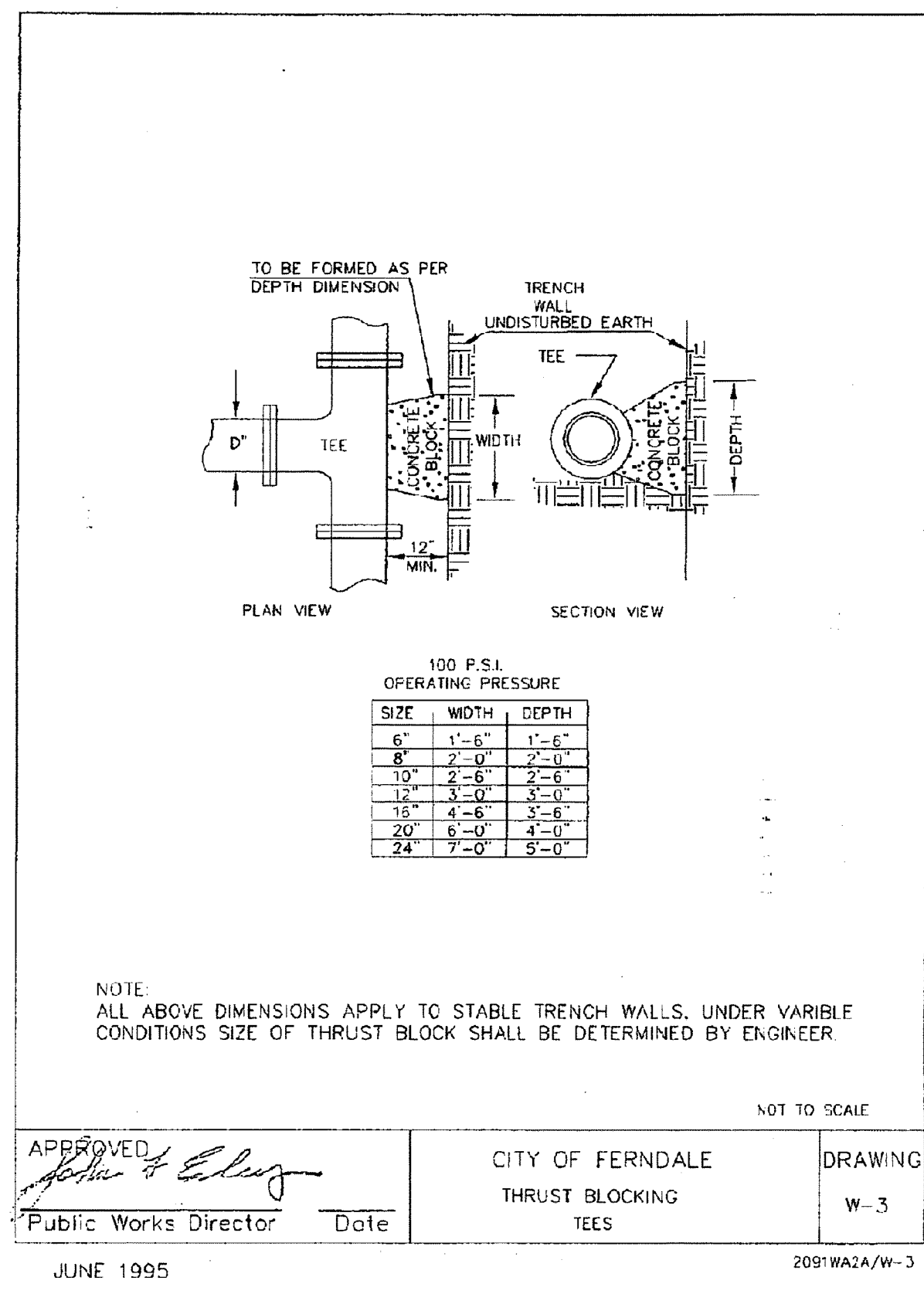
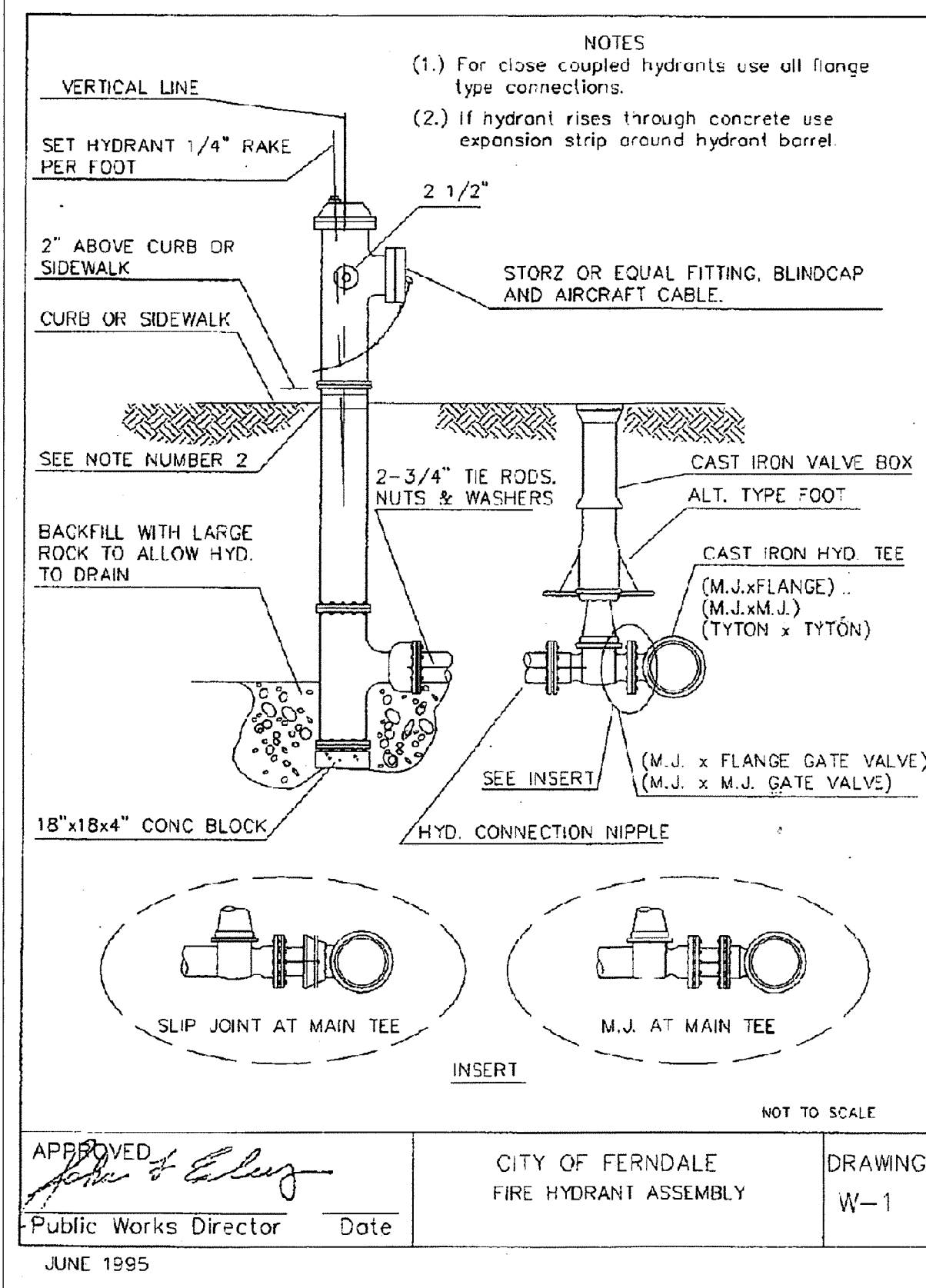
SUNSET PARK PLAT
SANITARY SEWER
PLAN & PROFILE
AS-BUILT DESIGN

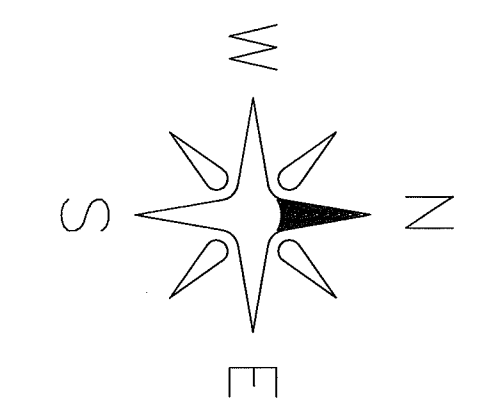
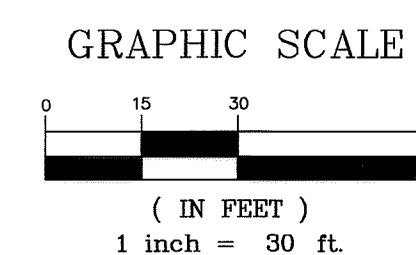
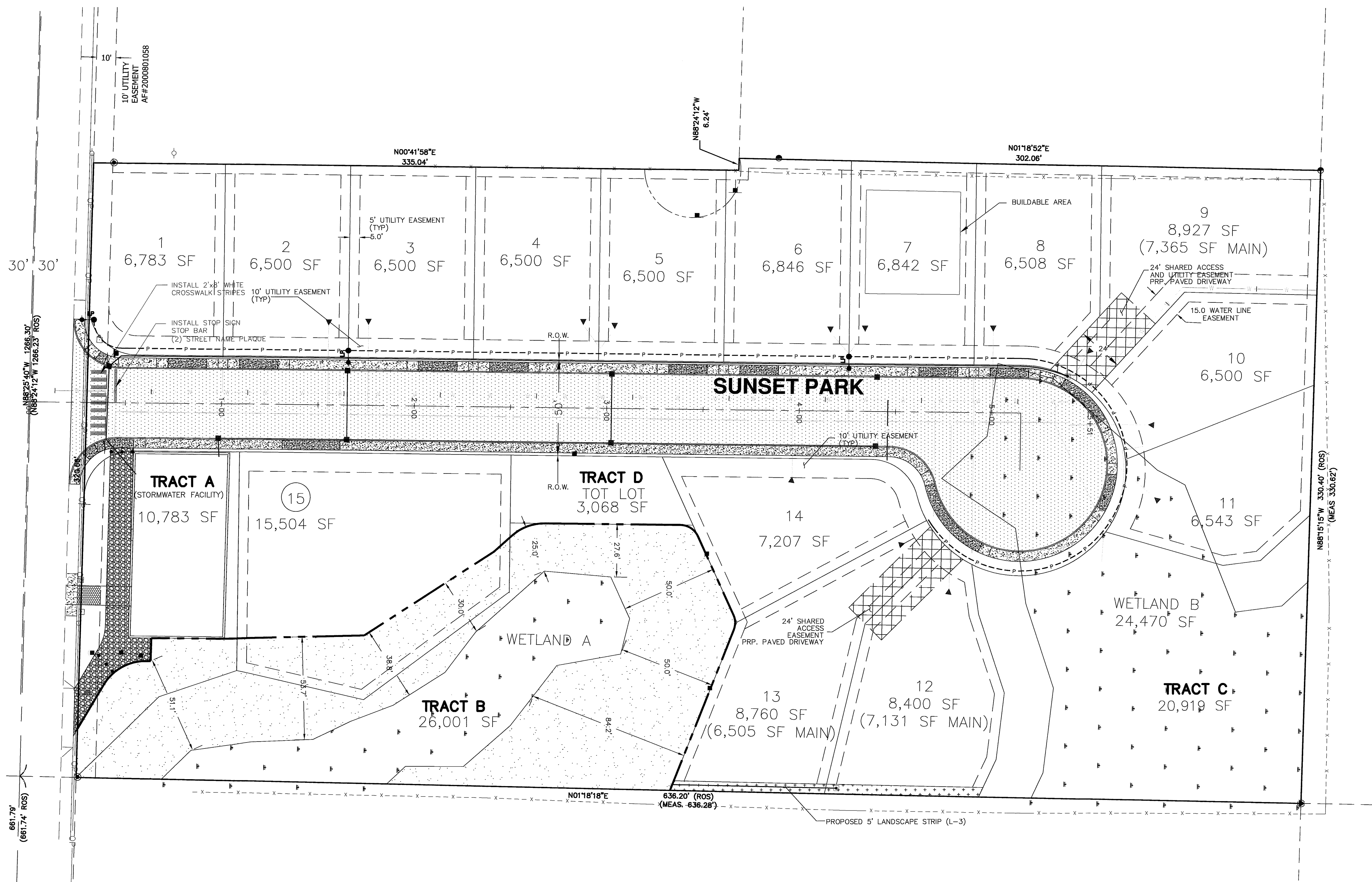
REVISIONS - INITIALS/DATE/COMMENTS		
SR	6/16/2008	SUBMITTAL #1
SR	12/23/2008	SUBMITTAL #2
SR	4/16/2009	SUBMITTAL #3

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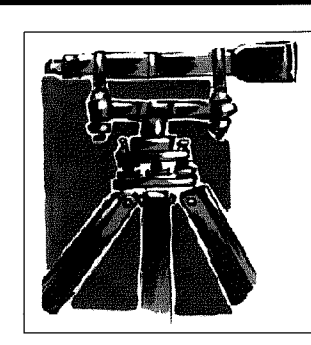
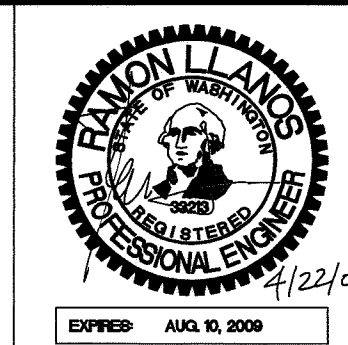
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DRAWN BY SR DATE 3/10/2009
CHECKED BY RL DATE 3/10/2009

SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC



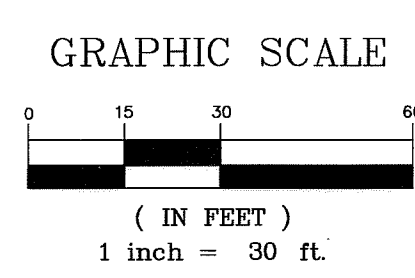
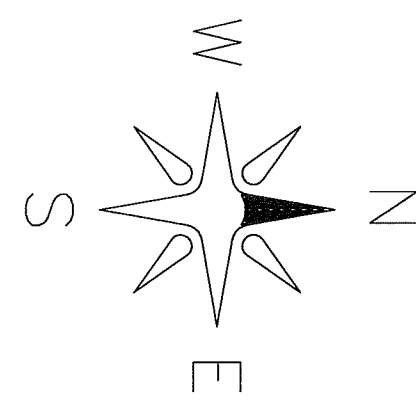
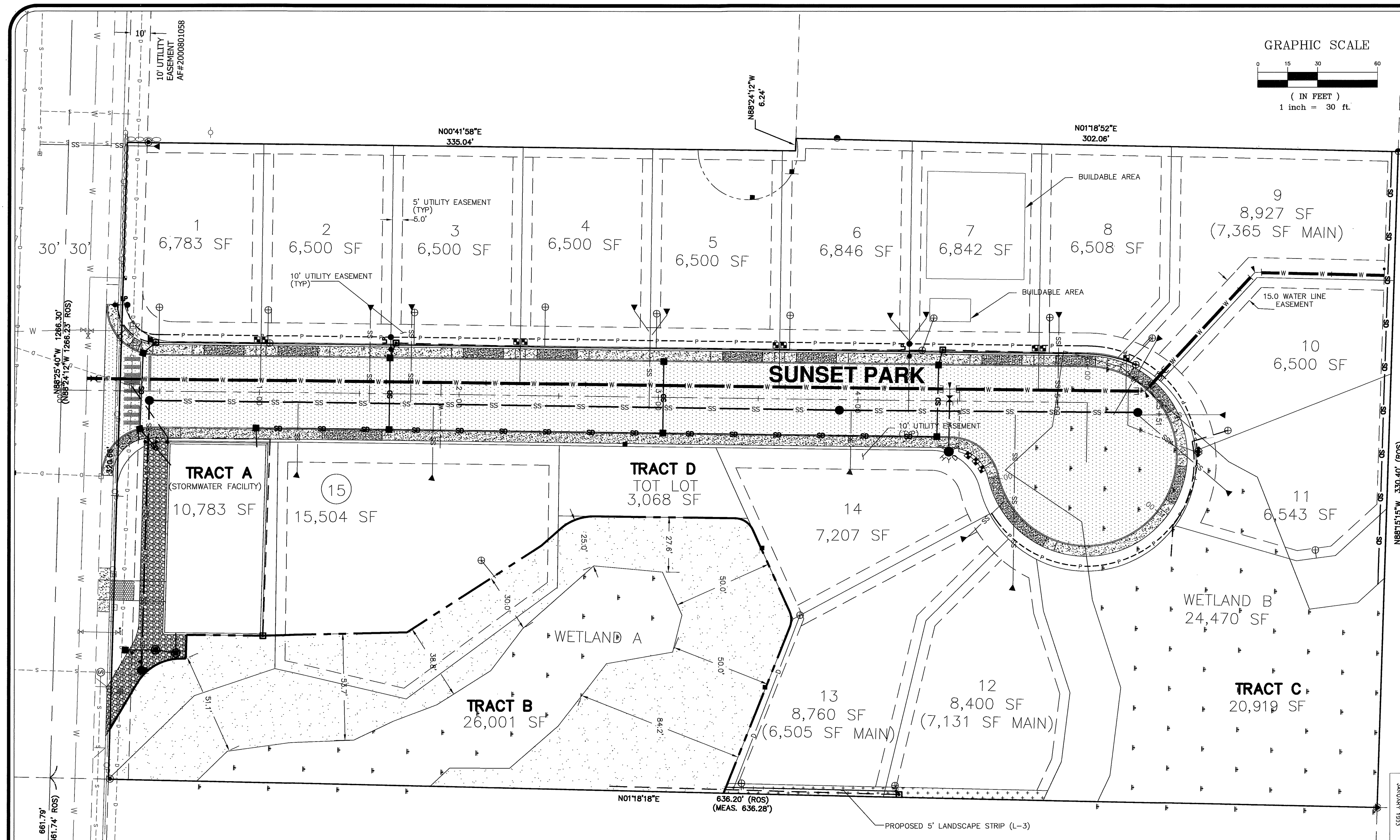
LDES, INC.
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FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

SUNSET PARK PLAT COMMON UTILITY-STREET LIGHTING LANDSCAPING & SIGNAGE PLAN AS-BUILT DESIGN

REVISIONS - INITIALS/DATE/COMMENTS		
SR	5/30/2008	SUBMITTAL #1
SR	3/10/2009	SUBMITTAL #2

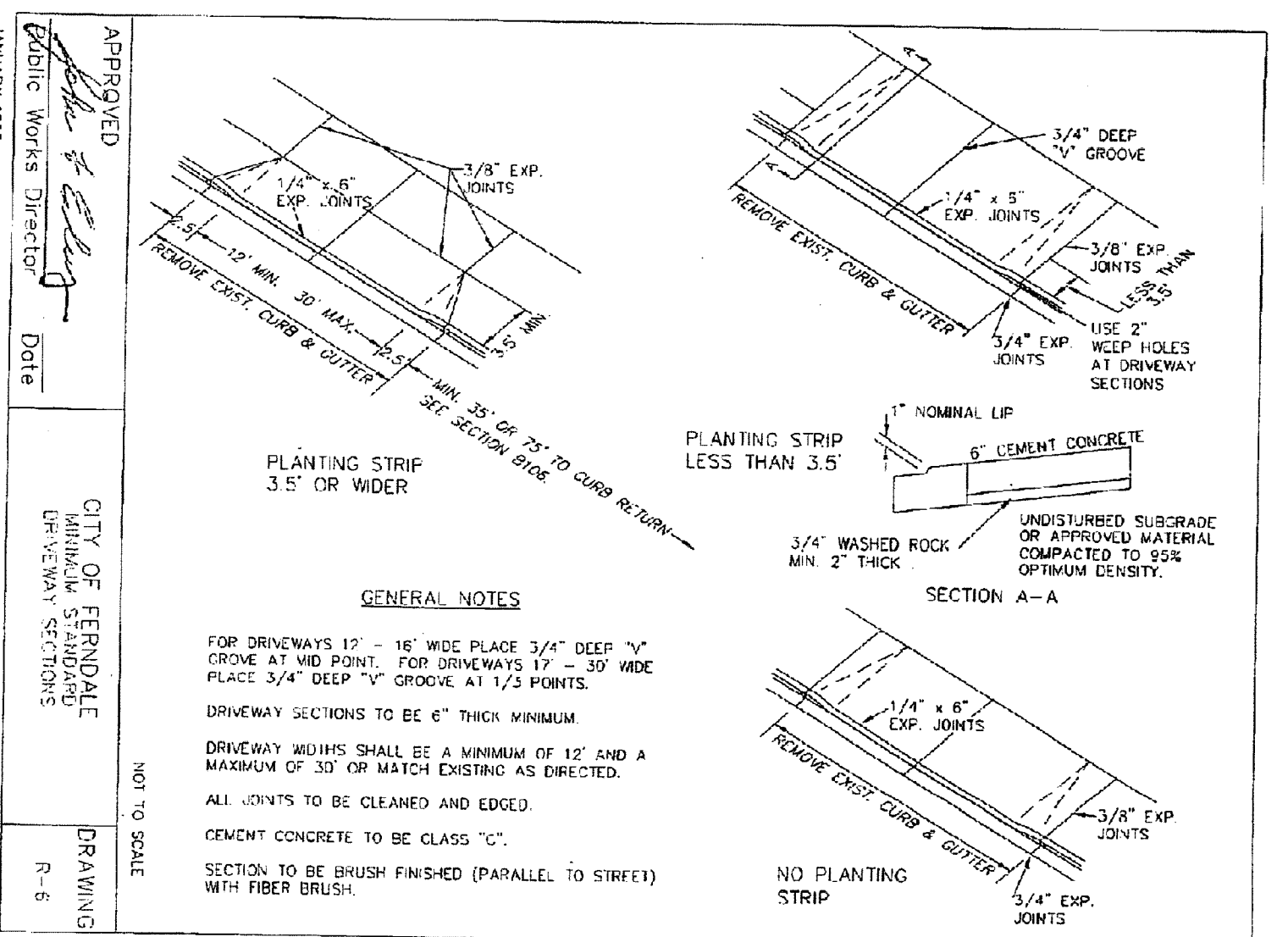
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APPROVED
BY: [Signature]
DATE: 3/10/2009
CITY OF FERNDAL



LEGEND:

- = FND BRASS MON
- = FND 1/2" REBAR W/ YPC PLS# 18897
- = FND REBAR AND CAP PLS# 18927
- = FND REBAR AND CAP PLS# 13138
- = EXIST SD CATCH BASIN (TYPE 1)
- = EXIST SD CATCH BASIN (TYPE 2)
- = EXIST SD INLET
- = EXIST SANITARY SEWER MANHOLE
- = EXIST SANITARY SEWER CLEANOUT
- = EXIST SANITARY SEWER SERVICE
- = EXISTING WATER BLOW-OFF VALVE
- = EXISTING WATER METER BOX
- = EXISTING WATER VALVE
- = EXISTING FIRE HYDRANT
- = EXIST POWER/AND OR UTILITY POLE
- = EXIST GUY POLE
- = EXIST GUY WIRE
- = EXIST LIGHT POLE
- = EXIST UTILITY POLE
- = EXIST SIGN
- = EXIST OVERHEAD POWER
- = EXIST UNDERGROUND POWER
- = EXIST OVERHEAD PHONE
- = EXIST UNDERGROUND PHONE
- = EXIST UNDERGROUND TV CABLE
- = EXIST GAS MAIN
- = EXIST WATER LINE
- = EXIST SANITARY SEWER LINE
- = EXIST STORM DRAIN LINE
- = EXIST BARBED WIRE FENCE
- = EXIST CONC. FENCE OR RET. WALL
- = EXIST CONTOUR (INDEX)
- = EXIST CONTOUR (NORMAL)
- = EXIST SILT FENCE
- = AS BUILT STORM DRAIN LINE
- = AS BUILT SAN. SEWER LINE
- = AS BUILT WATER LINE
- = AS BUILT ROOF DRAIN
- = STOP SIGN
- = LIGHT POLE LUMINARE W/DROP
- = AS BUILT FIRE HYDRANT
- = AS BUILT WATER METER BOX
- = AS BUILT WATER BLOW-OFF
- = GATE VALVE
- = 45° BEND
- = AS BUILT STORM DRAIN CLEANOUT
- = AS BUILT STORM DRAIN CATCH BASIN
- = AS BUILT STORM CONTROL STRUCTURE
- = AS BUILT SANITARY SEWER SERVICE
- = AS BUILT SEWER CLEANOUT
- = AS BUILT SEWER MANHOLE
- = BOLLARD
- = 6" SIDEWALK (DRIVEWAY SECTION)
- = 4" SIDEWALK
- = ROAD PAVEMENT



GENERAL NOTES

FOR DRIVEWAYS 12" - 16" WIDE PLACE 3/4" DEEP "V" GROOVE AT MID POINT. FOR DRIVEWAYS 17" - 30" WIDE PLACE 3/4" DEEP "V" GROOVE AT 1/3 POINTS.

DRIVEWAY SECTIONS TO BE 6" THICK MINIMUM.

DRIVEWAY BUILDS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 30" OR MATCH EXISTING AS DIRECTED.

ALL JOINTS TO BE CLEANED AND EGGED.

CEMENT CONCRETE TO BE CLASS "C".

SECTION TO BE BRUSH FINISHED (PARALLEL TO STREETS) WITH FIBER BRUSH.

SUNSET PARK PLAT

CONFLICT UTILITY

RESOLUTION PLAN

AS-BUILT DESIGN

REVISIONS - INITIALS/DATE/COMMENTS

SR	5/30/2008	SUBMITTAL #1
SR	3/10/2009	SUBMITTAL #2

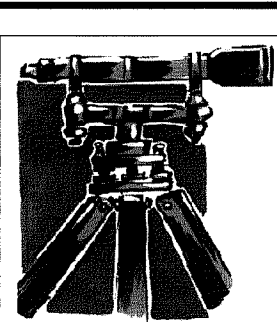
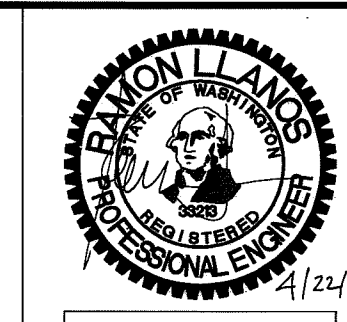
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DRAWN BY SR DATE 3/10/2009	SUNSET PARK PLAT
CHECKED BY RL DATE 3/10/2009	
JOB # 6057	FOR: KRAMER CONSTRUCTION, LLC



LDES, INC.
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FERNDAL, WA 98248
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00386.013 7.9.09 DD

APPROVED
BY: [Signature]
DATE: 3/10/2009
CITY OF FERNDAL
DRAWING
R-6

GENERAL REQUIREMENTS

1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. WORK AND MATERIALS SHALL ALSO CONFORM TO THE CITY OF FERNDALE DEVELOPMENT STANDARDS. IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
3. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN PUBLIC RIGHTS-OF-WAY.
4. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
5. ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE. REPRESENTATIVES FROM THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:
- A. PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
 - B. PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS-OF-WAY OR IN WATERLINE EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - C. PLACEMENT AND BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY OR IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - D. GRADING OF PUBLIC ROADWAY AT
 - 1) COMPLETION OF EXCAVATION TO SUBGRADE.
 - 2) COMPLETION OF BALLAST COURSE PLACEMENT.
 - 3) COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
 - E. POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - F. ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - G. OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
 - H. END OF MAINTENANCE PERIOD.
6. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUB-SURFACE CONDITIONS AND SOILS TYPES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23-TRAFFIC CONTROL, SHALL APPLY.
8. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
9. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATIONS FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.
10. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON A COMBINATION OF FIELD RECONNAISSANCE, FIELD SURVEY AND UTILITY COMPANY RECORDS AND ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES PRIOR TO STARTING CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555.
11. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
12. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST BETWEEN ACTUAL FIELD CONDITIONS AND THE ASSUMED CONDITIONS SHOWN ON THE APPROVED PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION, SO THAT NECESSARY PLAN OR DESIGN CHANGES CAN BE MADE. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR EXTRA WORK, INCLUDING REMOVAL AND RECONSTRUCTION OF NEWLY BUILT IMPROVEMENTS, MADE NECESSARY BY ERRORS OF DIMENSION OR GRADE ON THE APPROVED PLANS, UNLESS SUCH NOTIFICATION WAS GIVEN.
13. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING.
15. ALL MATERIALS TESTING REQUIREMENTS FOR THE IMPROVEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR. CONTRACTOR SHOULD DETERMINE THESE REQUIREMENTS PRIOR TO THE START OF CONSTRUCTION.
16. ALL PORTLAND CEMENT CONCRETE SHALL BE APWA CLASS 3000, PER APWA STANDARD SPECIFICATIONS, SECTION 6-02.3(2)B.
17. UNDERGROUND UTILITIES CONSTRUCTION
- A. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY. THE ENGINEER WILL PROVIDE CERTIFIED AS-BUILT MAPLARS TO PUBLIC WORKS UPON PROVISIONAL ACCEPTANCE OF ROAD AND UTILITY IMPROVEMENTS.
 - B. THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
 - i. NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - ii. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - iii. TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - iv. WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
 - C. UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS.
 - D. TESTING OF NEW WATER LINES, SANITARY SEWER LINES, AND STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.

ROAD

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:
- | | |
|--|---|
| TYPICAL STREET SECTION
PCC CURB AND GUTTER
PCC SIDEWALKS
PCC CURB RAMPS, ADA APPROACHES
SIDEWALK DRAINS
MONUMENTS | TYPICAL SECTION ON SHEET 04 OF THESE PLANS
CITY OF FERNDALE STANDARD DETAIL (COFSD) R-9
COFSD R-12
WSDOT STD. DETAIL F-3
COFSD ST-15
COFSD S-2 |
|--|---|
2. ALTERNATE PAVEMENT SECTIONS, WHEN DESIGNED BY A LICENSED GEOTECHNICAL ENGINEER, MAY BE SUBMITTED TO THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR FOR CONSIDERATION AND, IF APPROVED, USED IN PLACE OF THE PAVEMENT SECTION SHOWN ON THESE PLANS.
3. EARTHWORK
- A. THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
 - B. THE CONTRACTOR SHALL RAZE, REMOVE AND DISPOSE OF ALL BUILDING AND FOUNDATIONS, STRUCTURES, FENCES AND OTHER OBSTRUCTIONS THAT LIE WHOLLY OR PARTIALLY WITHIN THE PROJECT LIMITS.
 - C. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UNCOMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
 - D. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
 - E. MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.
 - F. UNSUITABLE MATERIAL, NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
 - F. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.
4. BASE COURSES
- A. GRAVEL BASES AND BALLAST SHALL NOT HAVE THE PERCENT PASSING THE U.S. NO. 200 SIEVE EXCEED 5%.
 - B. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
 - C. OWNER SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. ALL TESTING SHALL BE THROUGH ENG. REV. ACCOUNT AND PAID FOR BY OWNER.
5. PAVEMENTS
- A. SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
 - B. A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
 - C. ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT.
 - D. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL OVERLAY AND FEATHER NEW PAVEMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. APPLICATION OF A THIN PAINT COAT OF EMULSIFIED ASPHALT SHALL BE APPLIED TO INSURE PROPER BONDING.
 - E. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD.
6. STREET LIGHTING
- A. CONTRACTOR SHALL PROVIDE STREET ILLUMINATION IN ACCORDANCE WITH THE PROVISIONS OF SECTION 707 OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS. 100-WATT HIGH PRESSURE SODIUM LAMPS SHALL BE INSTALLED ON STANDARD CONCRETE OCTAGONAL OR ROUND POLES NO LESS THAN 25 FEET HIGH AND SPACED NO MORE THAN 250' APART, MEASURED ALONG THE PAVEMENT CENTERLINE. POLE LOCATIONS ARE SHOWN ON THESE PLANS.
 - B. FINAL LOCATIONS OF STREET LIGHTS IS TO BE COORDINATED WITH PUGET SOUND ENERGY.
 - C. CONTRACTOR IS TO COMPLY WITH THE SPECIFICATIONS SHOWN ON WSDOT STANDARD DETAIL J-11A, STANDARD JUNCTION BOX, UNLESS OTHERWISE DIRECTED BY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR.
 - D. CONTRACTOR MUST INFORM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR (4) WORKING DAYS IN ADVANCE.
7. MAILBOXES
- MAILBOXES SHALL BE TYPE I, II, AND/OR III - CBU (CENTRAL BOX UNIT), USPS APPROVED. FINAL LOCATION AS DETERMINED BY USPS.

STORM DRAINAGE

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:
- | | |
|---|--|
| "MAIN LINE" CATCH BASINS
"RESIDENTIAL SERVICE LINE" CATCH BASINS
THRU-CURB INLET FRAME AND GRATE
SIDEWALK DRAINS | TYPE 1, 1L OR 2, WSDOT STD. DETAILS B-1, B-1A OR B-1E
CITY OF FERNDALE STANDARD DETAIL (COFSD) ST-7
CITY OF FERNDALE STANDARD DETAIL (COFSD) ST-8
COFSD ST-15 |
|---|--|
2. ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 7-08.3(1). THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL AND ANY REQUIRED PIPE BEDDING TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE. DRAINAGE MATERIALS SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS SECTION 9-05.
3. STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP) AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-05.20. STORM SEWER PIPE HAVING DIAMETERS 8" AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-05.12.
4. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
5. UNLESS OTHERWISE SPECIFIED, CAST IRON PRODUCTS SHALL CONFORM TO ASTM DESIGNATION "A 48 CLASS 30" AND DUCTILE IRON PRODUCTS TO ASTM DESIGNATION "A 536 GRADE 80-55-06".
6. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
7. ALL DRAINAGE SERVICE STUBS SHALL BE MARKED FOR LOCATION WITH A PRESSURE TREATED 2" X 4" TIMBER, PAINTED WHITE OR A WHITE 2" DIA. PVC PIPE. BOTH TYPES OF LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.
8. MULTIPLE RESIDENTIAL STORM DRAIN SERVICES SHALL BE 6" PVC PIPE, DRAINING TO A COFSD ST-7 INLET. 8" PVC PIPE SHALL BE USED TO CONNECT EACH ST-7 INLET TO A NEARBY TYPE 1 OR TYPE 1L CATCH BASIN.
9. ALL STORM STUB INVERT ELEVATIONS SHALL BE CONSTRUCTED TO FACILITATE POSITIVE FLOW TO CATCH BASIN.

SANITARY SEWER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING SANITARY SEWER IMPROVEMENTS:
- | | |
|---|--|
| PIPE BEDDING
TRENCH BACKFILL
SS MANHOLE, TYPE 1-48"
SSMH RING & COVER, TYPE 2
SS CLEANOUTS
SIDE SEWERS | CITY OF FERNDALE STANDARD DETAIL (COFSD) SS-1
COFSD SS-15 & SS-1 & WSDOT STD. SPEC. SEC. 9-03.12
COFSD SS-2
COFSD SS-9 (BOLT DOWN/WATERTIGHT)
COFSD SS-5
COFSD SS-6, SS-8 & SS-13 |
|---|--|
2. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH A.P.W.A. STANDARD SPECIFICATIONS, 1996 EDITION, AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE.
3. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.
4. SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE (SDR-35) CONFORMING TO THE PROVISIONS OF ASTM D 3034 AND INSTALLED TO CITY SPECIFICATIONS.
5. SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL OR SUITABLE NATURAL MATERIAL AS DIRECTED BY THE ENGINEER, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
6. ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE SS-2, SS-3 OR SS-4, AND SHALL BE PRE-CHANNELED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
7. ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAILS SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4".
8. CONTRACTOR SHALL EXTEND SEWER STUBS BEYOND THE STREET RIGHT-OF-WAY LINE.
9. EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION PER COFSD SS-14, WITH A 2" DIA. PVC PIPE WITH THE TOP 18" PAINTED WHITE AND STENOILED WITH THE WORD "SEWER". THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

WATER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:
- | | |
|---|---|
| TRENCH BACKFILL
AIR/VACUUM RELEASE VALVE
BLOW-OFF ASSEMBLY
FIRE HYDRANT ASSEMBLY
THRUST BLOCKING
WATER SERVICE | COFSD W-11 & WSDOT STD. SPEC. SEC. 9-03.12
WSDOT STD. DETAIL B21-o
COFSD W-9 & W-10
COFSD W-1
COFSD W-2, W-3 & W-4
COFSD W-5 |
|---|---|
2. ALL WATERMAIN PIPE SHALL BE DUCTILE IRON, MINIMUM CLASS 50, PER AWWA STANDARDS H3-71 AND C151-71, WITH CEMENT LINING PER AWWA STANDARD C104-71. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705.
3. MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO AWWA SPECIFICATIONS C-110-71 AND C-104-71.
4. CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(21) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE-CAST BLOCKS ARE ALLOWED.
5. CONNECTIONS TO EXISTING WATER MAINS - PER WSDOT STD SPEC. 7-09.3(19), THE CONTRACTOR MUST NOTIFY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE. ALL CONNECTIONS SHALL BE DONE BY THE CONTRACTOR. CONNECTION TO EXISTING CITY WATER SYSTEM SHALL BE PAID IN ADVANCE BY A DEPOSIT.
6. ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTIONS 7-09.3(23) AND 7-09.3(24) AND OF THE WSDOT STD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION - CURRENT EDITION. HYDROSTATIC TEST PRESSURE. FOR WATER MAIN ACCEPTANCE, SHALL BE 225 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. ALL DISINFECTION AND BACTERIOLOGICAL TESTS SHALL BE CONDUCTED BY THE CITY OF FERNDALE LABORATORY. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.
7. BACKFILL SHALL BE GRAVEL BASE, CLASS B, IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF OPTIMUM DENSITY.
8. ALL PIPE SHALL HAVE A MINIMUM COVER OF 42".
9. ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES.
- GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 8 INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NONSHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED.
- ALL VALVES SHALL HAVE NONRISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS.
- VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.
10. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS. ALL WATER SERVICES SHALL BE MARKED FOR LOCATION WITH A METER BOX PER COFSD W-5.
11. FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COF STANDARD DETAIL W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
- A. FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY-VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND CABLE SHALL BE SUPPLIED. HYDRANTS SHALL EITHER BE IOWA OR M.H. 929T HYDRANTS.
 - B. FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND. HYDRANTS PAINTED FACTORY YELLOW MAY NOT REQUIRE ADDITION PAINTING.
 - C. IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2" OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
 - D. UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 225 PSI OR 50 PSI IN EXCESS OF STREET MAIN PRESSURE, WHICHEVER IS GREATER. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
 - E. FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

CITY OF FERNDALE CONSTRUCTION NOTES

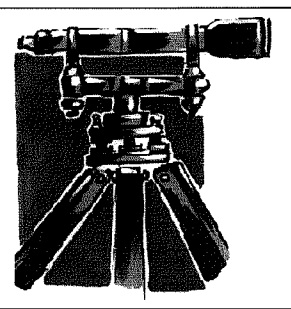
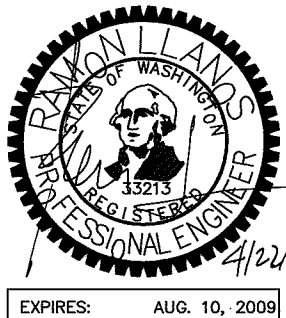
DRAWN BY SR DATE 3/10/2009

CHECKED BY RL DATE 3/10/2009

SUNSET PARK PLAT

JOB # 6057

FOR: KRAMER CONSTRUCTION, LLC



LDES, INC.
5160 INDUSTRIAL PL #108
FERNDALE, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

SUNSET PARK PLAT
FERNDALE GENERAL
CONSTRUCTION NOTES
RECORD DRAWINGS

REVISIONS - INITIALS/DATE/COMMENTS

SR	5/30/08	SUBMITTAL #1

SHEET

14

OF

14

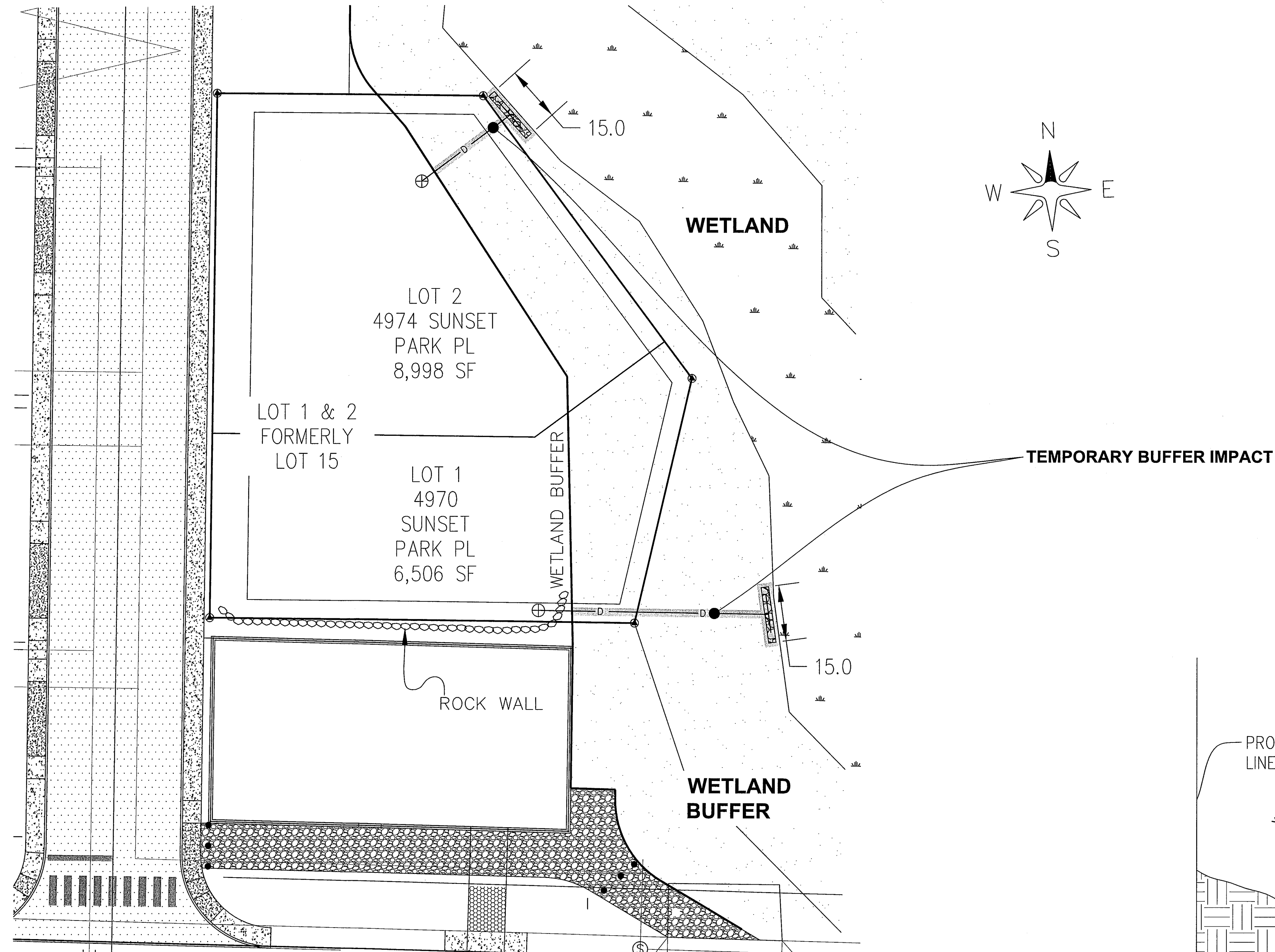
APPROVED

NEW 5/30/08

BY RL CITY OF FERNDALE

00396.014 7-9-09 PD

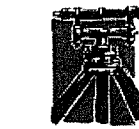
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PLAN VIEW
NTS

*** NOTE:**

1. ROOFTOPS SHALL NOT BE CONSTRUCTED USING TREATED WOOD OR ASPHALT SHINGLES TREATED WITH ALGAE RESISTANT MATERIAL.
2. DISPERSION TRENCHES SHALL BE PLACED IN BETWEEN PLANT ROWS.
3. IF ANY NATIVE PLANTS ARE REMOVED AS PART OF CONSTRUCTION, THEY SHALL BE REPLACED WITH THE SAME NATIVE SPECIES.



LAND DEVELOPMENT ENGINEERING & SURVEYING
5160 INDUSTRIAL PL. #108
FERNDALE, WA 98248
(360) 383-0620

Memo

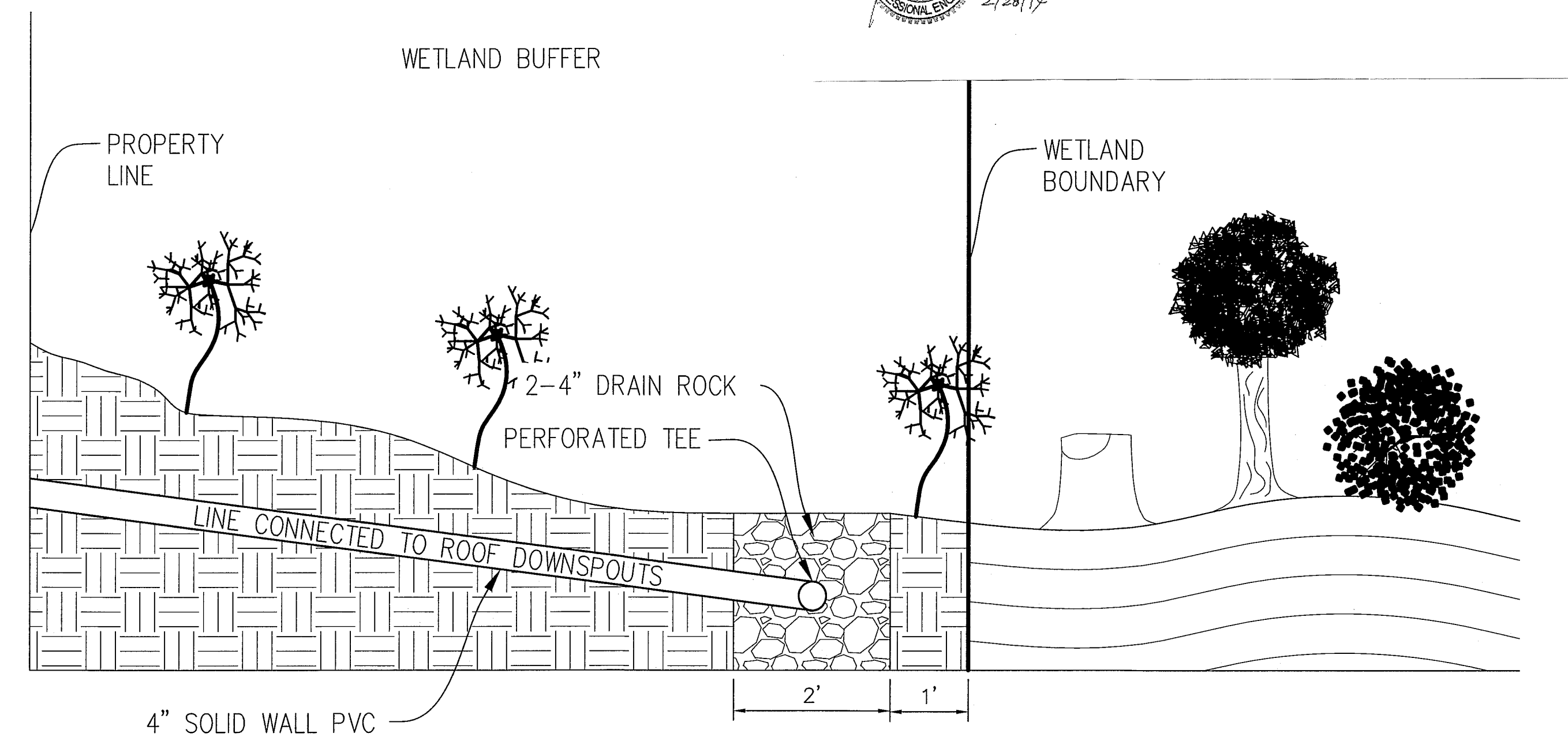
To: Wendy LaRocca - City of Ferndale
From: Ramon Llanos
Date: February 28, 2014
Re: Sunset Park (NWS2006-00549)

Wendy,

The purpose of this Memo is to verify that the rooftop dispersion system for Lot 15 of the Sunset Park Plat (Lots 1 & 2 of the Sunset Park Short Plat) has been installed per the engineer's specifications.
Our office conducted a site visit on Friday, February 28, 2014 and verified that the dispersion system meets all the requirements set forth by the city and the engineer of record.
If you have any questions, comments or concerns please feel free to contact our office.

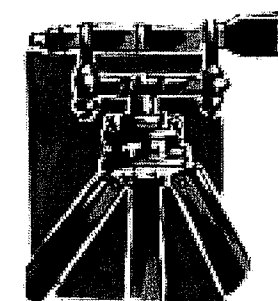
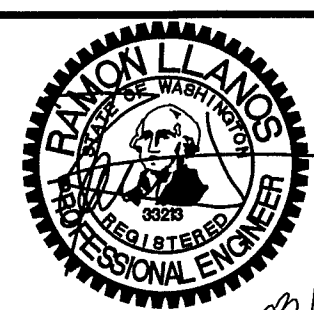
Best Regards,

Ramon Llanos, P.E.



SECTION VIEW
NTS

1	PRELIMINARY	AD	12/05/13
2	ADD NOTES	AD	2/03/14
3			
NO.	REVISION	BY	DATE



LDES, INC.
5160 INDUSTRIAL PL. #108
FERNDAL, WA 98248
PHONE 360-383-0620
FAX 360-383-0639

JOB NO.:	6057
DESIGNED BY:	AD
DRAWN BY:	AD
CHECKED BY:	RL

KRAMER CONSTRUCTION INC.

ROOFTOP DISPERSION EXHIBIT
SUNSET PARK SHORT PLAT

SHEET

01

OF

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