

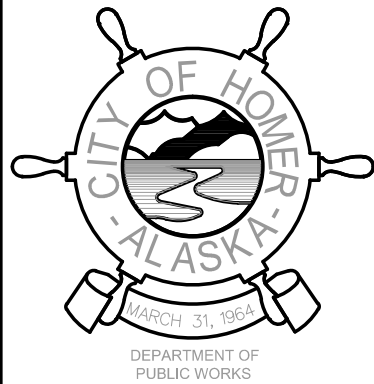
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SOPHIA HUFF

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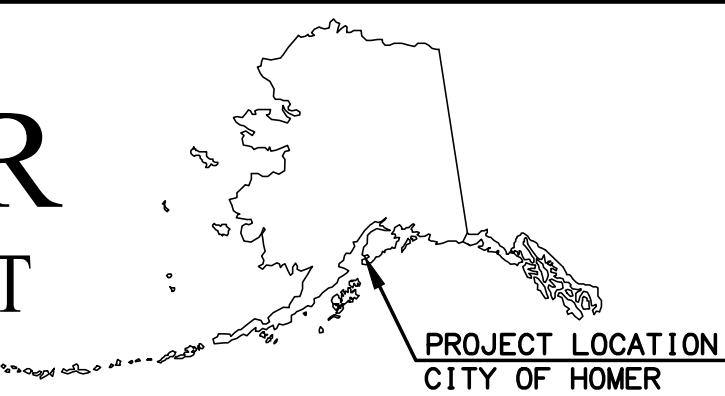
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CITY OF HOMER

PUBLIC WORKS DEPARTMENT



REVISIONS			YEAR	SHEET NO.	TOTAL 'A' SHEETS
NO.	DATE	DESCRIPTION			
			2016	A1	A3
				PLAN SET TOTAL	29

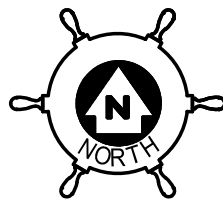
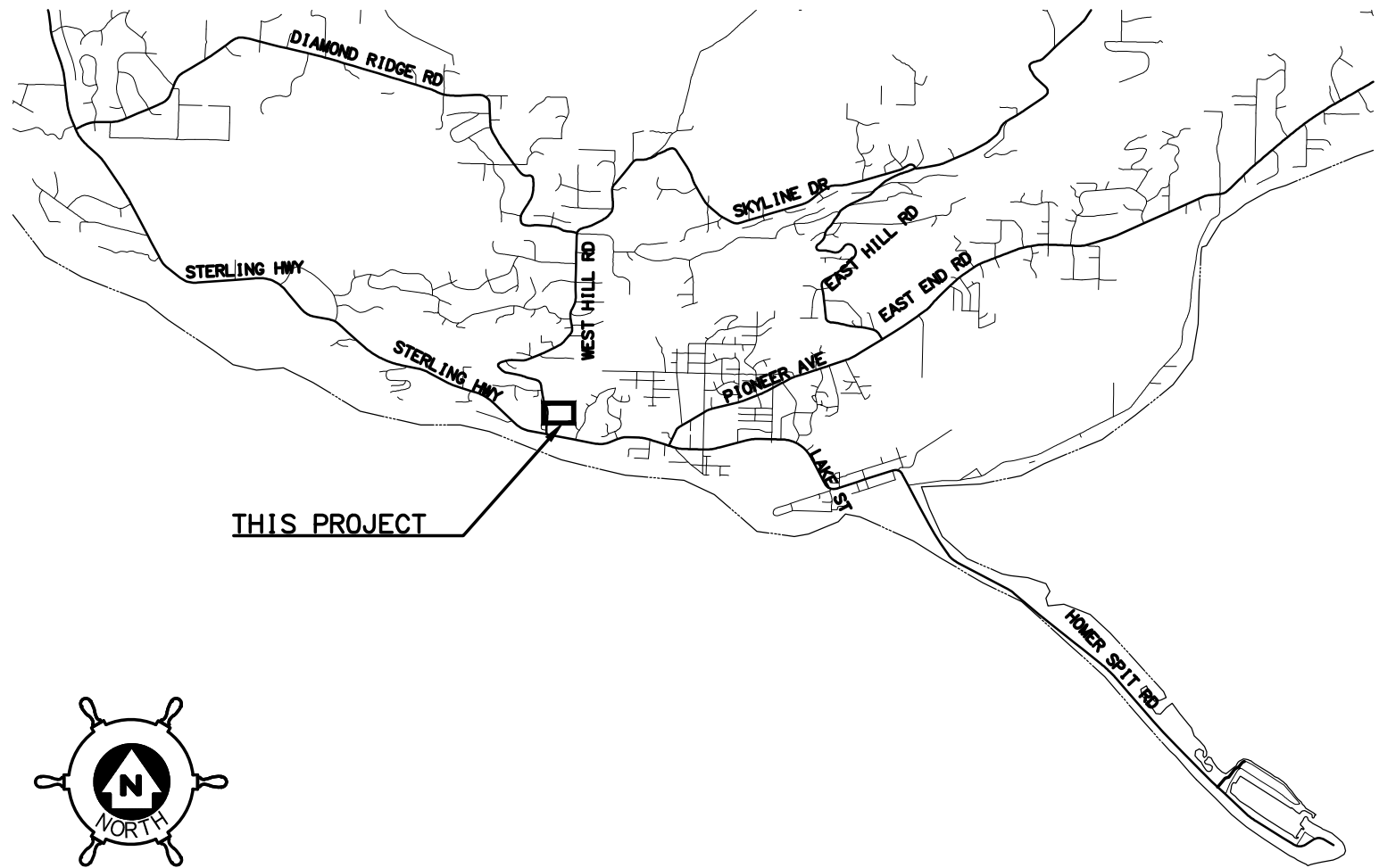
MAYOR
BETH WYTHE

CITY MANAGER
KATIE KOESTER

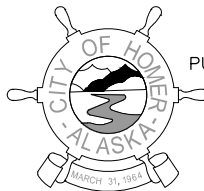
PUBLIC WORKS DIRECTOR
CAREY S. MEYER, P.E.

CITY COUNCIL MEMBERS
DAVID LEWIS
GUS VAN DYKE
DONNA ADERHOLD
CATRIONA REYNOLDS
BRYAN ZAK
HEATH SMITH

ERIC LANE ROAD AND SEWER MAIN IMPROVEMENTS



INDEX	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND
A3	GENERAL NOTES AND SURVEY CONTROL
B1	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
C2-C5	TECHNICAL SPECIFICATIONS
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H2	SIGNING AND STRIPING PLANS
H3	SIGN SUMMARY
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U1-U8	SEWER AND WATER SHEETS



CITY OF HOMER, ALASKA
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8/25/2016

PLANS DEVELOPED BY:
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CERT. OF AUTH. NO. AECL 1102

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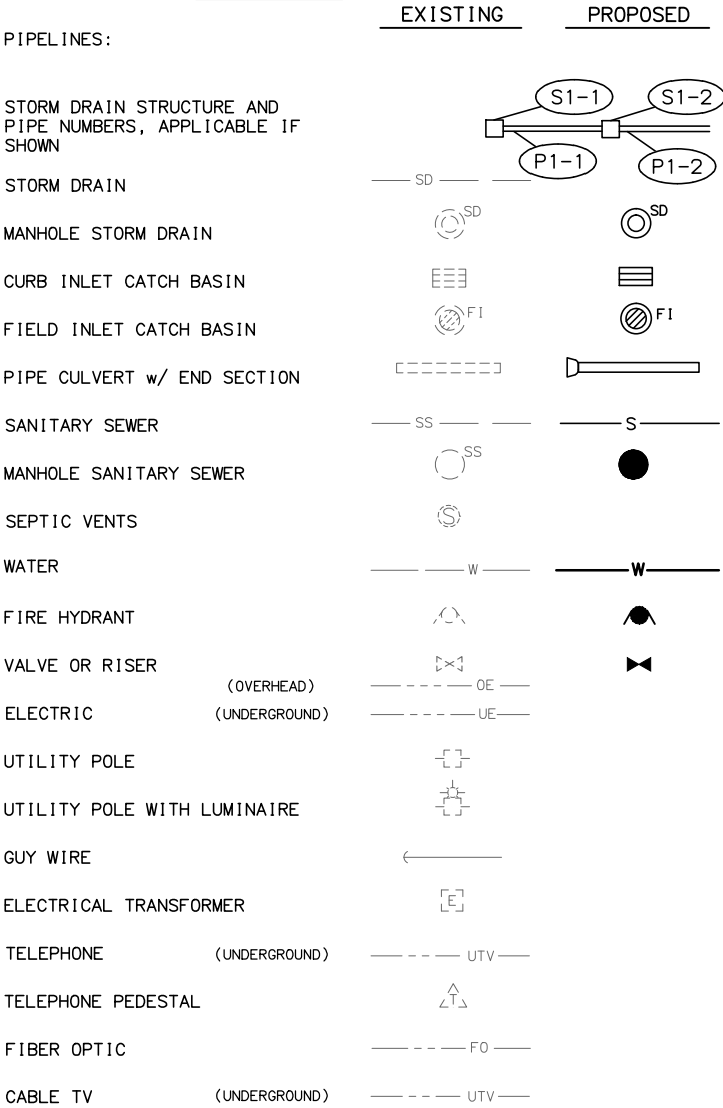
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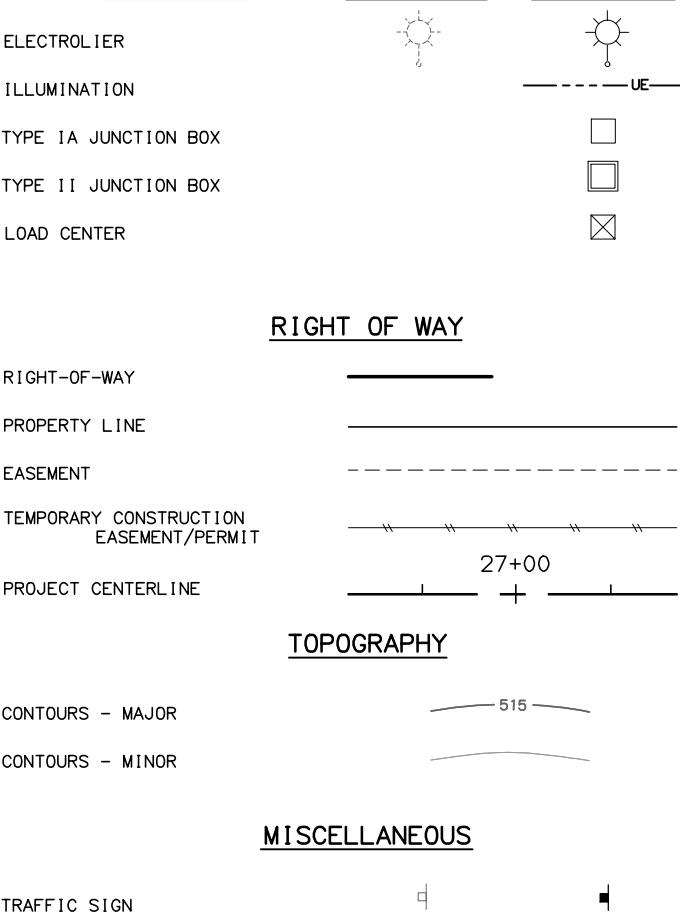
UTILITIES



ABBREVIATIONS

AC - ASPHALT CEMENT
ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA - AMERICAN WATER WORKS ASSOCIATION
BF - BOARD FOOT
B.O.P. - BOTTOM OF PIPE
CB - CATCH BASIN AND CONSTRUCT CATCH BASIN
CI - CURB INLET FRAME & GRATE
CMP - CORRUGATED METAL PIPE
C.O.H. - CITY OF HOMER
CY - CUBIC YARD
D.I.P. - DUCTILE IRON PIPE
DOT - DEPARTMENT OF TRANSPORTATION
E - EASTING
EA - EACH
ELEV - ELEVATION
FI - FIELD INLET FRAME & GRATE
F&I - FURNISH AND INSTALL
FT - FOOT OR FEET
GRSC - GALVANIZED RIGID STEEL CONDUIT
GV - GATE VALVE

UTILITIES



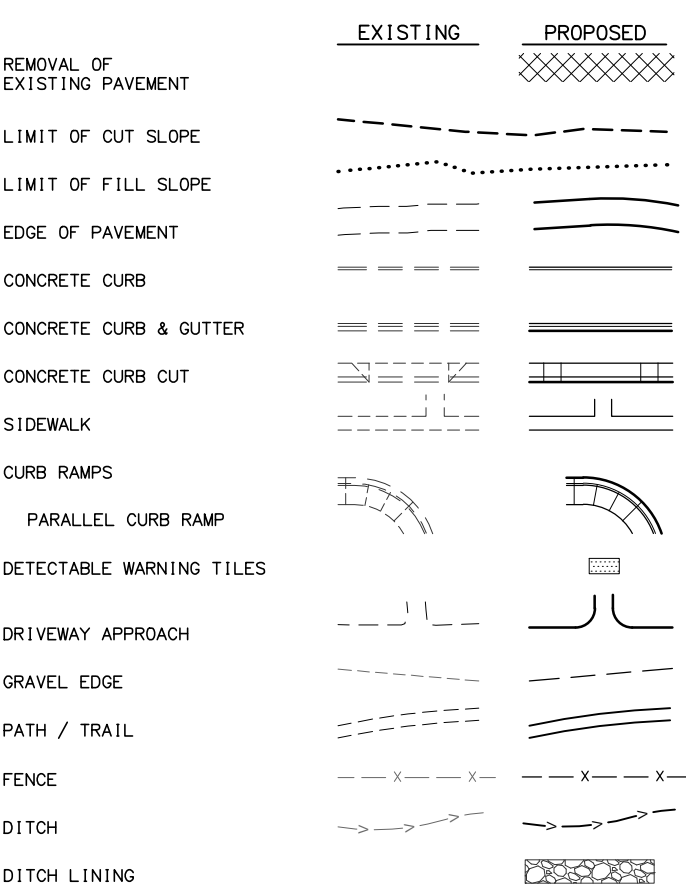
RIGHT OF WAY

TOPOGRAPHY

MISCELLANEOUS

H - HORIZONTAL
HDPE - HIGH-DENSITY POLYETHYLENE
HMWPE - HIGH MOLECULAR WEIGHT POLYETHYLENE
INV - INVERT
IPS - IRON PIPE SIZE
L - LENGTH
LF - LINEAR FOOT
LOC - LIP OF CURB
LT - LEFT
LS - LUMP SUM
MAX - MAXIMUM
MIN - MINIMUM
MJ - MECHANICAL JOINT
MH - MANHOLE FRAME & GRATE
MSF - THOUSAND SQUARE FEET
N - NORTHING
NO. - NUMBER
N.T.S. - NOT TO SCALE
O.S.H.A. - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC - POINT OF CURVATURE

ROADWAY



SHEET NO.

TOTAL SHEETS

A2

29

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO.

DATE

DESCRIPTION

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PUBLIC WORKS DEPARTMENT

CITY OF HOMER
ALASKA

MARCH 31, 1981

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FAX: (907) 235-3145

STATE OF ALASKA

40th

John B. Pekar
CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

LEGEND

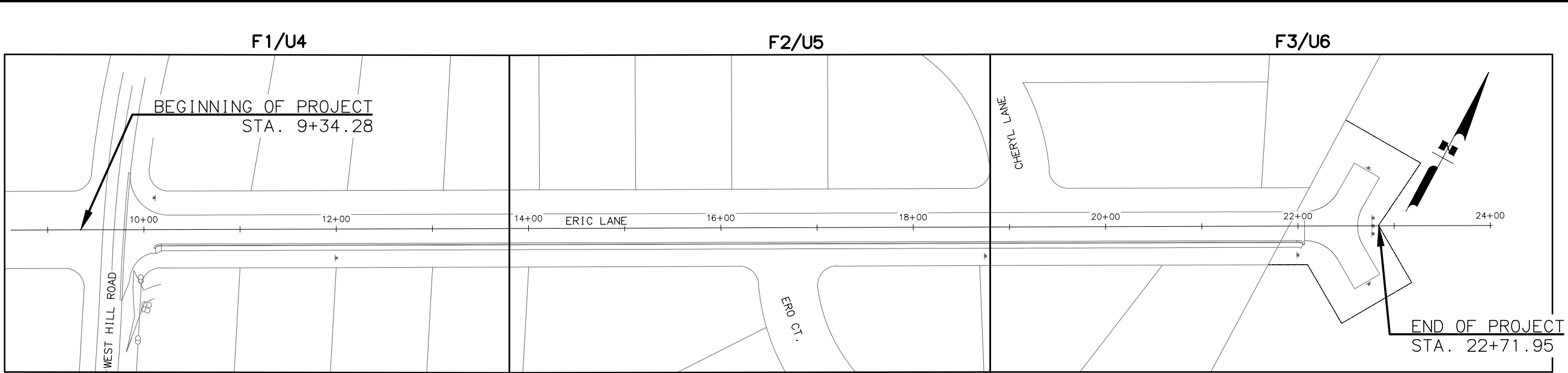
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SOPHIA RUFF

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GENERAL NOTES:

- CONTRACTOR SHALL COMPLETE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF HOMER STANDARD SPECIFICATIONS (2011). THE DRAWINGS, TECHNICAL SPECIFICATIONS (ON SHEETS C2 THROUGH C5), AND SPECIAL PROVISIONS TAKE PRECEDENCE OVER THE STANDARD SPECIFICATIONS.
- THE CITY SHALL OBTAIN ALL NECESSARY, LOCAL, STATE AND FEDERAL PERMITS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR-PREPARED SWPPP PLAN SHALL BE MAINTAINED AT THE JOB SITE.
- CONTRACTOR SHALL MAINTAIN "REDLINE" RECORD DRAWINGS ON A CLEAN SET OF CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL MAINTAIN THE "REDLINES" CURRENT ON A DAILY BASIS WHICH SHALL BE AVAILABLE TO THE ENGINEER FOR INSPECTION ON THE JOB SITE. CONTRACTOR SHALL RECORD SURVEY NOTES AND SUBMIT DAILY TO THE ENGINEER. CONTRACTOR SHALL RECORD SURVEY NOTES FOR SUBMITTAL WITH RECORD DRAWINGS, INCLUDING HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD. CONTRACTOR SHALL RECORD ALL DEVIATIONS FROM THE PLANS.
- CONSTRUCTION OPERATIONS REQUIRED FOR THIS PROJECT SHALL REMAIN WITHIN EXISTING CITY OF HOMER AND STATE OF ALASKA RIGHTS-OF-WAY AND EASEMENTS, UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND THE AFFECTED PROPERTY OWNER.
- LOCATIONS DEPICTED FOR THE UTILITIES AND OTHER EXISTING FEATURES ARE APPROXIMATE. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
- UNDERGROUND ELECTRICAL, TELECOMMUNICATION, WATER, SEWER AND NATURAL GAS UTILITY LINES OCCUR WITHIN THE PROJECT AREA; CONTRACTOR SHALL COORDINATE WORK ACCORDINGLY. ALL WORK IN CLOSE PROXIMITY TO EXISTING UNDER-GROUND LINES SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, CODES AND GUIDELINES, AND THE FACILITY CLEARANCE REQUIREMENTS OF THE GOVERNING UTILITY. CONTRACTOR SHALL HAND DIG WITHIN TWO FEET OF BURIED UTILITY FACILITIES. THE COST OF RELOCATING EXISTING UTILITIES SHALL BE BORNE BY THE CITY OF HOMER, IF NECESSARY.
- CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT TO A LINE 2 FEET BEYOND THE PROPOSED IMPROVEMENTS, DURING THE INITIAL EXCAVATION OPERATIONS. IF EXISTING PAVEMENT HAS BEEN LIFTED, IF EDGE DOES NOT OCCUR IN UNDISTURBED MATERIAL, OR IF EDGE IS LOCATED WITHIN A TRAVEL LANE, FURTHER REMOVAL MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, TO PROVIDE A PROPER TRANSITION BETWEEN NEW AND EXISTING PAVEMENT. SAW CUTTING OF EXISTING PAVEMENT IS INCIDENTAL TO THE BID ITEM "REMOVE PAVEMENT", AND NO SEPARATE PAYMENT SHALL BE MADE. SAW CUTS ACROSS ROAD LANES SHALL BE SKEWED AT AN ANGLE OF 15 TO 25 DEGREES WHERE MATCHING EXISTING ASPHALT.
- CONTRACTOR SHALL APPLY TACK COAT TO THE SAW CUT ASPHALT FACE PRIOR TO PAVING. CONTRACTOR SHALL SAW CUT CURB & GUTTER AND SIDEWALK AT THE NEAREST JOINT AT OR BEYOND REMOVAL LIMITS OR AS DIRECTED BY THE ENGINEER. TACK COAT IS INCIDENTAL TO THE ASPHALT PAVEMENT BID ITEM.
- LIMITS OF EXCAVATION AND BACKFILL SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL REMOVE ORGANIC MATERIAL FROM THE SUBGRADE TO A DEPTH TO BE DETERMINED BY THE ENGINEER. CONTRACTOR SHALL UTILIZE EXCAVATED ORGANIC MATERIAL IN PLACE OF TOPSOIL OVER ALL DISTURBED AREAS. ORGANIC MATERIAL DEPTH SHALL BE FOUR INCHES. PAYMENT FOR STOCKPILING ORGANICS AND PLACING ORGANICS SHALL BE MADE UNDER THE TOPSOIL PAY ITEM.
- WORK AND MATERIALS REQUIRED FOR REMOVING LITTER OR DEBRIS THAT EXIST WITHIN THE PROJECT LIMITS ARE INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE.
- CONTRACTOR SHALL REPLACE ALL DISTURBED PROPERTY CORNERS. PAYMENT FOR REPLACING DISTURBED PROPERTY CORNER IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- CONTRACTOR SHALL RESTORE DISTURBED PROPERTY TO PRECONSTRUCTION CONDITION(S), UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR RESTORING DISTURBED PROPERTY IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- DEWATERING MAY BE REQUIRED TO REMOVE SURFACE AND SUBSURFACE WATER FROM THE ROADWAY AND AND UTILITY EXCAVATION AND DEWATERING IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- THIS PROJECT WAS DESIGNED FROM A PLANIMETRIC AND TOPOGRAPHIC SURVEY PERFORMED BY DONALD E. MULLIKIN P.L.S, WITH MULLIKIN SURVEYS IN JUNE 2016.
- ALL BEDDING SHALL BE NATIVE MATERIAL MEETING THE REQUIREMENTS OF CLASS C BEDDING MATERIAL, TO CONFORM WITH ADEC TYPE 4/5 BEDDING REQUIREMENTS.
- WHERE STORM DRAIN OR SANITARY SEWER CROSS WATER MAINS, THERE SHALL BE A MINIMUM OF 9 FEET SEPARATION BETWEEN ALL PIPE JOINTS.

STANDARD DRAWING INDEX

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

- CITY OF HOMER
- 200.06 COMPACTION OF BACKFILL
 - 200.07 CLASS C AND C BEDDING
 - 300.01 CURB AND GUTTER CROSS SECTIONS
 - 500.01 SANITARY SEWER TYPE A
 - 500.02 SANITARY SEWER MANHOLE BASE PLAN
 - 500.03 SANITARY SEWER MANHOLE HEIGHTS
 - 500.07 SANITARY SEWER MANHOLE INSERT (INFLOW PREVENTER)
 - 500.08 SANITARY SEWER MANHOLE COVER
 - 500.09 SANITARY SEWER FRAME
 - 500.13 SANITARY SEWER SERVICE CONNECTION
 - 600.05 HYDRANT GUARD POSTS
 - 600.10 GATE VALVE EXTENSION ROD
 - 800.01 STORM DRAIN CORRUGATED METAL PIPE BAND DETAIL
 - 800.02 STORM DRAIN MANHOLE TYPE I
 - 800.08 STORM DRAIN MANHOLE COVER
 - 800.09 STORM DRAIN MANHOLE FRAME
 - 800.10 STORM DRAIN MANHOLE HEIGHTS
 - 800.11 STORM DRAIN PRECAST CATCH BASIN FOR TYPE 1 CURB + GUTTER
 - 800.12 STORM DRAIN CATCH BASIN INLET FOR TYPE 1 CURB + GUTTER

STATE OF ALASKA
CR-T-01.02 UNSIGNALIZED INTERSECTION STOP AND CROSSING

CALL BEFORE YOU DIG!

CONTRACTOR SHALL CALL A MINIMUM OF
3 DAYS IN ADVANCE OF CONSTRUCTION

ALASKA DIGLINE....907-278-3121 OR 800-478-3121

CALL OR GO TO WWW.AKONECALL.COM/STATEWIDE.HTM
FOR MEMBER LIST OF WHO WILL BE NOTIFIED

SHEET NO.
A3

TOTAL SHEETS
29

ADDENDUM NO.

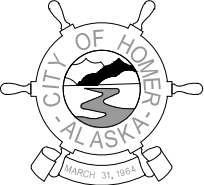
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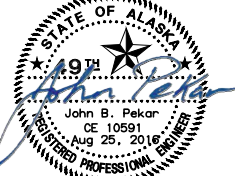
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PLANS DEVELOPED BY:
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Anchorage, Alaska 99503
(907) 346-2373
CERT. OF AUTH. NO. AECL 1102

FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT



PHONE: (907) 235-3170
FAX: (907) 235-3145



CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
GENERAL NOTES
AND SURVEY
CONTROL

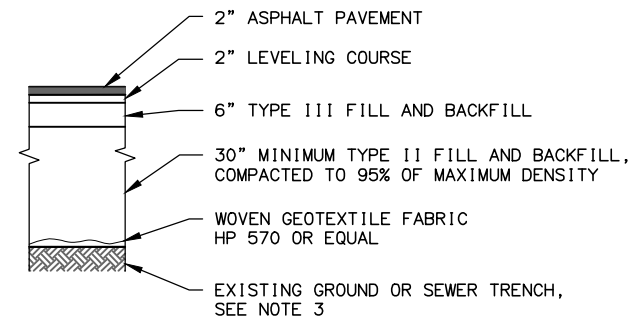
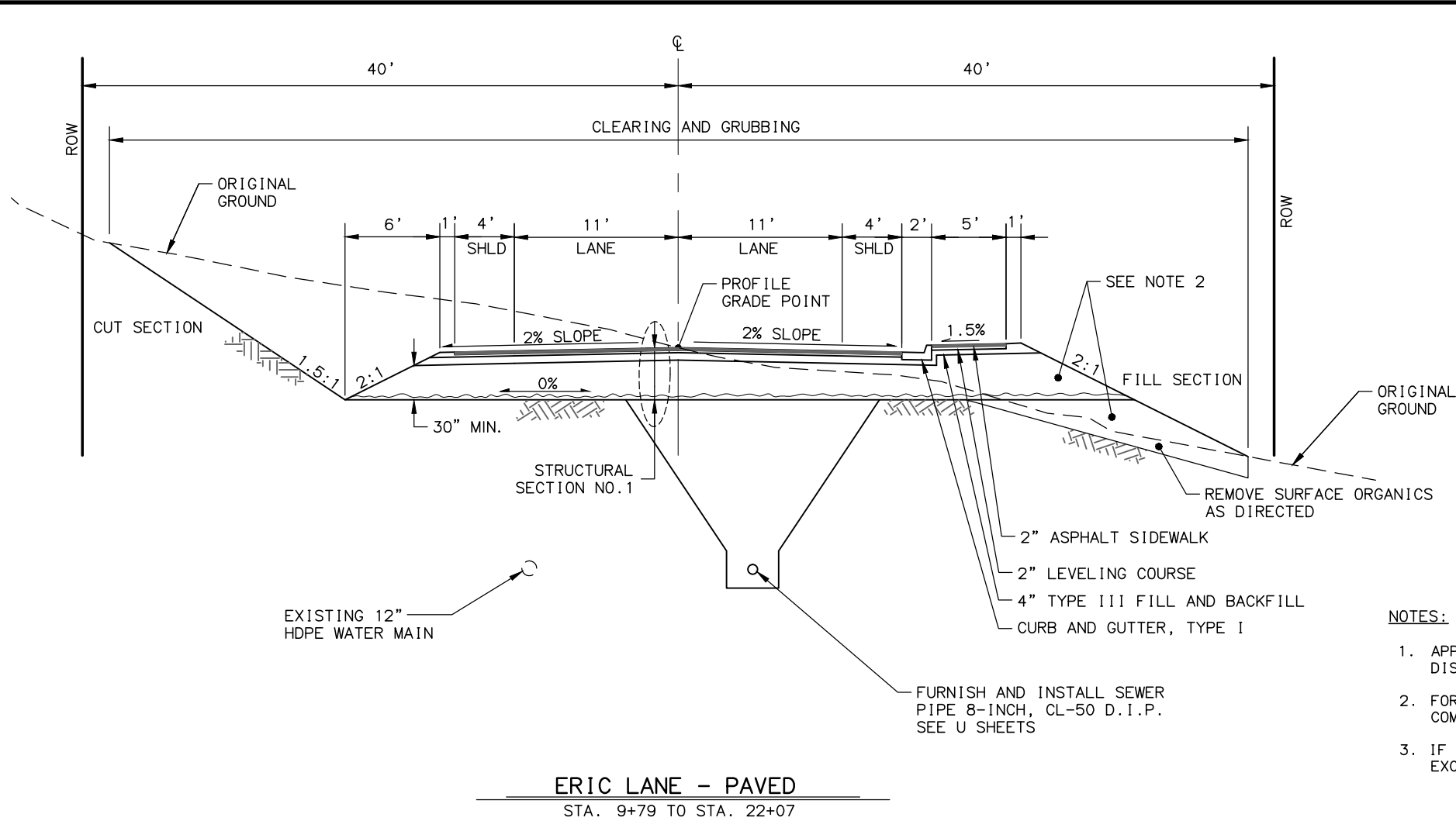
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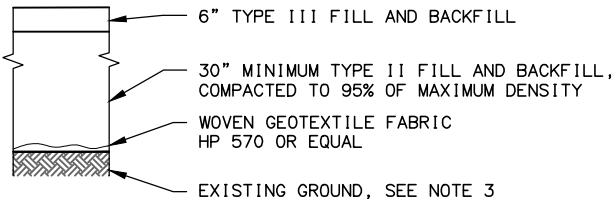
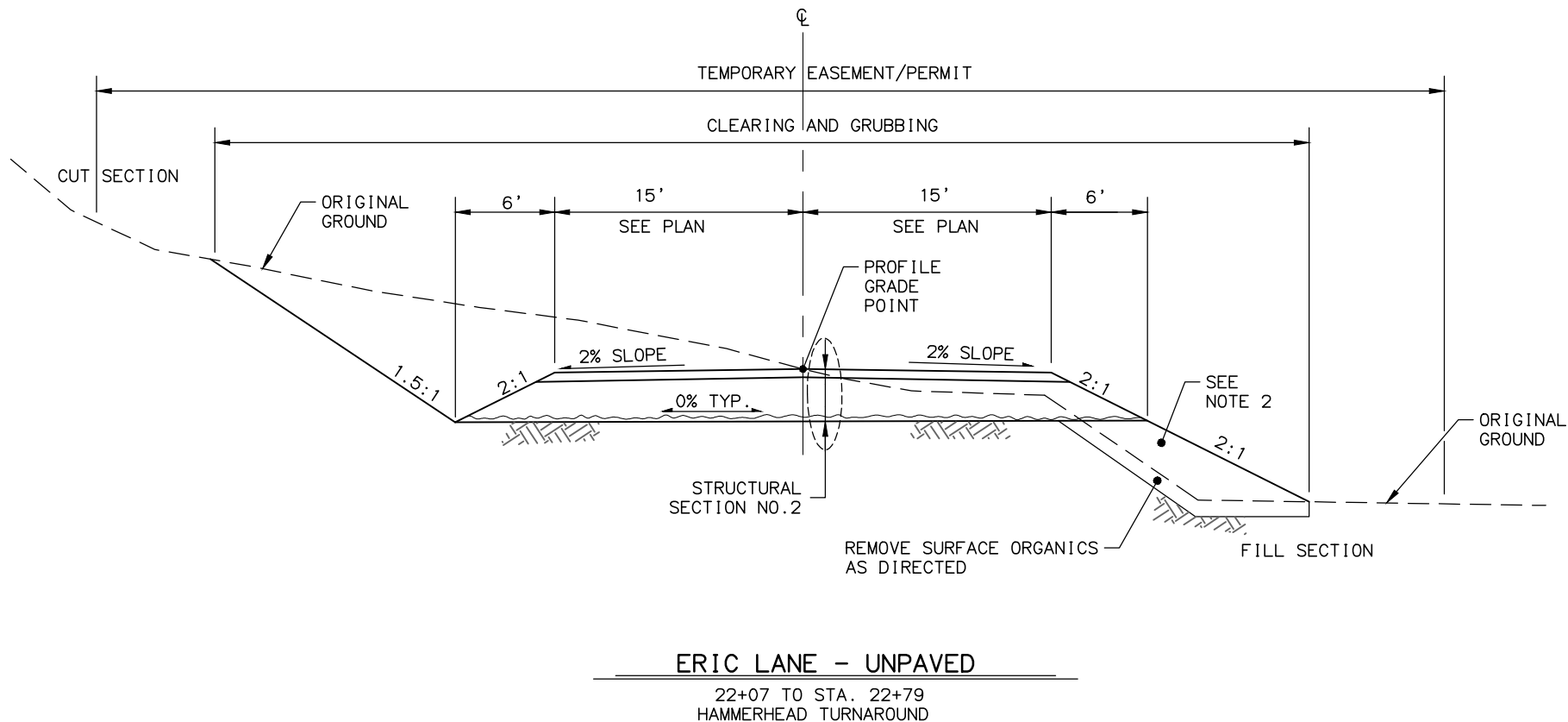


STRUCTURAL SECTION NO. 1

N.T.S.

NOTES:

1. APPLY 4" SALVAGED ON-SITE ORGANICS AND SEED TO ALL DISTURBED AREAS OR AS DIRECTED BY THE ENGINEER.
2. FOR EMBANKMENT FILL, PROVIDE TYPE II FILL AND BACKFILL COMPACTED TO 95% OF MAXIMUM DENSITY.
3. IF UNSUITABLE SOILS ARE ENCOUNTERED AT THE BOTTOM OF EXCAVATION, INCREASE DEPTH AS DIRECTED BY THE ENGINEER.



STRUCTURAL SECTION NO. 2

N.T.S.

SHEET NO.	TOTAL SHEETS	
B1	29	
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
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CITY OF HOMER
ALASKA
MARCH 31, 1984

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STATE OF ALASKA
19th
John B. Pekar
CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

TYPICAL SECTIONS

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SOPHIA HUFF

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ESTIMATE OF QUANTITIES				
ITEM NO.	SPEC. NO.	WORK DESCRIPTION	UNIT	ESTIMATED QUANTITY
A-1	101	MOBILIZATION AND DEMOBILIZATION	LS	1
A-2	102	CONSTRUCTION SURVEYING	LS	1
A-3	103	TRAFFIC MAINTENANCE	LS	1
A-4	202	CLEARING AND GRUBBING	LS	1
A-5	204	EXCAVATION	CY	11,600
A-6	205	TYPE II FILL AND BACKFILL	TON	13,100
A-7	205	TYPE III FILL AND BACKFILL	TON	2,100
A-8	206	LEVELING COURSE	TON	600
A-9	208	COMPACTION CONTROL BY THE CONTRACTOR	LS	1
A-10	215	PIPE BORING	LF	88
A-11	219	REMOVE EXISTING PAVEMENT	SY	30
A-12	220	DITCH LINING (6-INCHES THICK)	TON	22.0
A-13	302	CURB AND GUTTER, ALL TYPES	LF	1,200
A-14	401	ASPHALT PAVEMENT	TON	500
A-15	402	PAINTED TRAFFIC MARKINGS	LS	1
A-16	404	ASPHALT SIDEWALK	TON	100
A-17	502	FURNISH AND INSTALL SEWER PIPE	LF	1,163
A-18	503	CONSTRUCT MANHOLE	EA	7
A-19	510	SANITARY SEWER SERVICE CONNECTION (4-INCH)	EA	18
A-20	604	FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY (SINGLE PUMPER)	EA	2
A-21	606	WATER SERVICE CONNECTION	EA	18
A-22	607	ADJUST VALVE BOX TO FINISH GRADE	EA	4
A-23	702 (W)	WOVEN GEOTEXTILE FABRIC	SY	7,808
A-24	704	FURNISH & INSTALL 4" THICK INSULATION	BF	432
A-25	707	FURNISH & INSTALL STANDARD SIGN	EA	14
A-26	708	SEEDING (TYPE 1)	MSF	38
A-27	710	TOPSOIL (STOCKPILE ORGANICS; PLACE AT 4" DEPTH)	MSF	38
A-28	802	FURNISH AND INSTALL CMP (12-INCH)	LF	86
A-29	802	FURNISH AND INSTALL CMP (18-INCH)	LF	80
A-30	802	FURNISH AND INSTALL CMP (24-INCH)	LF	61
A-31	802-E	FURNISH AND INSTALL CMP END SECTION	EA	2
A-32	804	STORM DRAIN MANHOLE	EA	3
A-33	806	CONSTRUCT CATCH BASIN	EA	3
A-34	9001	STORM WATER POLLUTION PREVENTION PLAN, TYPE 3	LS	1

TABLE OF ESTIMATING FACTORS		
SPEC NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
205	TYPE II FILL AND BACKFILL	144 LBS. / C.F.
205	TYPE III FILL AND BACKFILL	144 LBS. / C.F.
206	LEVELING COURSE	144 LBS. / C.F.
220	DITCH LINING (6-INCHES THICK)	108 LBS. / C.F.
401	ASPHALT PAVING	151 LBS. / C.F.
404	ASPHALT SIDEWALK	151 LBS. / C.F.

SHEET NO.
C1

TOTAL SHEETS
29

ADDENDUM NO.

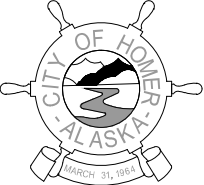
ATTACHMENT NO.

REVISIONS

NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
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FOR
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PUBLIC WORKS DEPARTMENT



PHONE: (907) 235-3170
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John B. Pekar
CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
ESTIMATE OF
QUANTITIES

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SOPHIA HUFF

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DIVISION 200 EARTHWORK

SECTION 210 FOUNDATION MATERIAL

Delete subsections 210.4 and 210.5 and replace with the following under Division 200:

210.4 Method of Measurement

Foundation material shall be measured per subsection 205.4.

210.5 Basis of Payment

Payment for this item shall be made per subsection 205.5.

Remove section 215 and replace with the following:

SECTION 215 PIPE BORING

215.1 General

The work under this section consists of performing all operations necessary for of furnishing all labor, equipment, and materials necessary to install the high-density polyethylene (HDPE) pipeline by horizontal directional drilling (HDD), boring, auguring, and/or jacking under a roadway. This work shall include all services, equipment, materials and labor for the complete and proper installation, testing, restoration of underground utilities and environmental protection and restoration.

215.2 Materials

The sewer pipe and fitting material shall be HDPE with a cell classification of 345434C or better in accordance with ASTM D3350. In addition, the material must exceed 1000 hours when 97 tested in accordance with the ASTM F1248, the Ring Environmental Stress Crack Resistance Test with fewer than 50 percent (50%) failures. The extruded pipe shall have impact strengths greater than three feet pounds per inch (3 ft.# / inch), in accordance with the ASTM D256 Izod Impact Test.

The pipe thickness must conform to the most conservative design with respect to design calculations for the critical combination of internal and external pressure, pullback, and bending. The HDPE pipe dimension ratio (DR) shall not be greater than eleven (11) in any case.

Butt fusion of the pipe and fittings shall be performed in accordance with the pipe manufacturer's recommendations as to equipment and technique. The fusion operation shall be performed by an individual who has demonstrated the ability to fuse polyethylene pipe in the manner recommended by the pipe supplier. The individual performing the fusing procedure must hold a current certification for fusing HDPE as stated in Title 49.1 DOT Certification.

Bolts for flanged connections will meet the minimum standard ASTM A307A unless otherwise noted.

215.3 Construction

The method of boring or jacking a casing shall be optional to the Contractor, except that prior to commencing jacking or boring operations, the Contractor will be required to furnish evidence to the Engineer showing that his planned method of jacking and boring has worked satisfactorily in other areas under similar conditions. The excavation at both ends of the boring shall be included under the Pipe Boring Pay Unit.

The Contractor shall provide written notice to the Engineer at least 72 hours in advance of the planned inception of major drilling activities, including pilot bore launch, reaming / pipe pullback. The Contractor shall immediately notify the Engineer, in writing, when any significant problems are encountered or if ground conditions are considered by the Contractor to be materially and significantly different from those represented

within the Contract Documents. All work by the Contractor shall be performed in the presence of the Engineer, unless Engineer grants prior written approval to perform such work in Engineer's absence.

The Contractor is responsible for repairing any damage to the roadway or structural fill damaged by the work.

All boring pits shall be adequately signed and barricaded to protect the public from entering the pit.

The pipe shall be certified by the Contractor as meeting all requirements of the specifications. The fabricated pipe shall be pressure-tested by the Contractor prior to pullback and after installation is completed, in accordance with new sewer main requirements specified in SECTION 502 FURNISH AND INSTALL PIPE.

215.4 Method of Measurement

Measurement shall be from center of manhole structure to center of manhole structure of the HDPE sewer main accepted and completed. No measurement will be made for trench excavation and backfill. No compensation will be made for installations abandoned or aborted due to deviations in excess of allowable tolerances.

Payment shall include compensation for all boring pit excavations and backfill and for the repair of any damage done to areas surrounding the boring operations.

215.5 Basis of Payment

Payment for sewer pipe horizontal directional drilling shall include all Work described in this Section and shall consist of all labor, materials and equipment required to construct and install the horizontal directional drilling work as shown on the drawings and described herein.

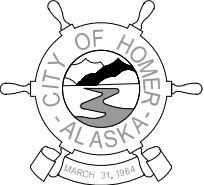
Payment shall be made under the following unit:

ITEM	DESCRIPTION	UNIT
215	Pipe Boring	Linear Foot

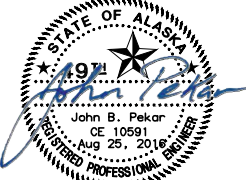
SHEET NO.	TOTAL SHEETS	
C2	29	
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
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CERT. OF AUTH. NO. AECL 1102

FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT



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CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
TECHNICAL
SPECIFICATIONS

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
TECHNICAL
SPECIFICATIONS

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SOPHIA HUFF

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DIVISION 700 MISCELLANEOUS CONSTRUCTION

Delete Section 702 under division 700 and replace with the following:

SECTION 702 GEOTEXTILE SYNTHETIC FABRIC

702.1 General

The placement of synthetic fabric shall be as recommended by the manufacturer and as shown on the plans.

702.2 Material

a. Woven Fabric

The synthetic woven fabric shall, at a minimum, meet the following specifications, or equal, and as approved by the Engineer.

Synthetic Fabric Minimum Specifications:

Properties	Test Method	Value
Grab Tensile Strength (lbs)	ASTM D4632	400
Elongation (%)	ASTM D4632	15
Trapezoid Tear (lbs)	ASTM D4533	180
CBR Puncture (lbs)	ASTM D6241	2000
Ultra Violet Stability (Strength Retained % at 500 hours)	ASTM D4355	80
Apparent Opening Size CW02215 (US Sieve Size)	ASTM D4751	30
Permittivity (1/sec)	ASTM D4491	0.4
Vertical Water Flow Rate (GPM / SF)	ASTM D4491 (Falling Head)	30
Wide Width Tensile Strength (lbs/ft)	ASTM D4595	4800

702.3 Construction

The sub-grade shall be shaped according to the typical section on the plans and shall be free of large rocks, sticks, and deleterious material. Fabric shall be installed full roadway width or as shown on the plans. Fabric shall be joined with adjacent pieces of fabric by overlapping. Sections shall be overlapped a minimum of three feet (3'), or sewn as required by the manufacturer.

Where fabric passes through a horizontal curve, the practice of back lapping on the inside of the curve will be permitted. Where manholes and valve boxes will protrude through the fabric, the fabric shall be neatly cut in the shape of the manhole or the valve box. A second piece of fabric shall then be cut in the same manner and placed on top of the main fabric. The second piece shall extend at least four feet (4') in all directions from the manhole or valve box. Fill and backfill shall be dumped and spilled over the fabric. No equipment shall operate either directly on the fabric or on less than one foot (1') of classified backfill.

702.4 Method of Measurement

Synthetic fabric shall be measured by the net square yard of ground surface covered. No additional measurement will be made for patches required around manholes and valve boxes or for laps required at fabric joints.

702.5 Basis of Payment

Basis of payment for this item shall be in accordance with *Section 10.7* and shall be full payment for work described in this section.

Payment will be made under

ITEM	DESCRIPTION	UNIT
702 (W)	Woven Geotextile Fabric	Square Yard

SHEET NO.

C4

TOTAL SHEETS

29

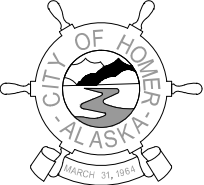
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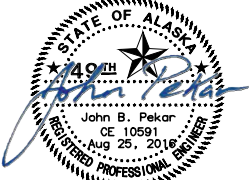
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REVISIONS

NO.	DATE	DESCRIPTION

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The City and the Contractor will monitor the site and determine if any special additional work is required beyond the basic work identified in the SWPPP. Any work items above and beyond that listed will be paid for on a time and material basis if additional control measures are deemed necessary by the City.

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
9001	Storm Water Pollution Prevention Plan (Type)	Lump Sum

CITY OF HOMER
ERIC LANE
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TECHNICAL
SPECIFICATIONS

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SPEC NO. 215			
PIPE BORING			
START STA.	END STA.	LENGTH (LF)	REMARKS
109+32.35	110+19.48	88	SEE SHEET U4; CASING NOT REQ'D
	TOTAL	88	

SPEC NO. 219			
REMOVAL OF EXISTING PAVEMENT			
SHEET	LOCATION	SY	REMARKS
F1	STA. 9+79 TO STA. 9+81	30	WEST HILL RD INTERSECTION
	TOTAL	30	

SPEC NO. 220									
DITCH LINING (6-INCHES THICK)									
START STA.	END STA.	OFFSET	LENGTH (FT)	AVG WIDTH (FT)	AREA (SF)	DEPTH (FT)	VOLUME (CY)	TON	REMARKS
10+18	10+33	LT	14.5	8	116	0.5	2.1	4.0	CATCH BASIN
10+16	10+23	RT	6	6	36	0.5	0.7	1.0	END SECTION
13+04	13+23	LT	18.5	19	342	0.5	6.3	9.0	DITCH DIKE
16+94	17+01	RT	6	6	36	0.5	0.7	1.0	END SECTION
16+83	17+09	LT	14.5	16.0	232	0.5	4.3	7.0	CATCH BASIN
				TOTAL	762		14.1	22.0	

SPEC NO. 302					
CURB AND GUTTER, ALL TYPES					
SHEET	BEGIN STATION	END STATION	OFFSET	LENGTH (LF)	REMARKS
F1-F3	10+12	22+07	RT	1,195	TYPE 1 C&G
			TOTAL	1,200	

SPEC NO. 704			
FURNISH & INSTALL 4” THICK INSULATION			
SHEET	LOCATION	QTY (BOARD FOOT)	REMARKS
F1	STA. 10+25, 10 LT	144	PLACE INSULATION 4 INCHES BELOW SD, L=6’, W=6’, 4 INCHES THICK
F2	STA. 17+02, 12 RT	144	PLACE INSULATION 4 INCHES BELOW SD, L=6’, W=6’, 4 INCHES THICK
F2	STA. 17+02, 7 LT	144	PLACE INSULATION 4 INCHES BELOW SD, L=6’, W=6’, 4 INCHES THICK
	TOTAL	432	

NOTE: ADDITIONAL INSULATION IS REQUIRED AND INCIDENTAL TO FIRE HYDRANT SPEC NO. 604. SEE DETAIL SHEET U7.

SHEET NO.

D1

TOTAL SHEETS

29

ADDENDUM NO.

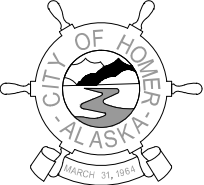
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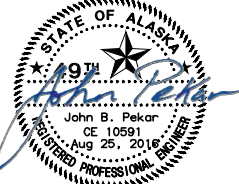
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CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

SUMMARY TABLES

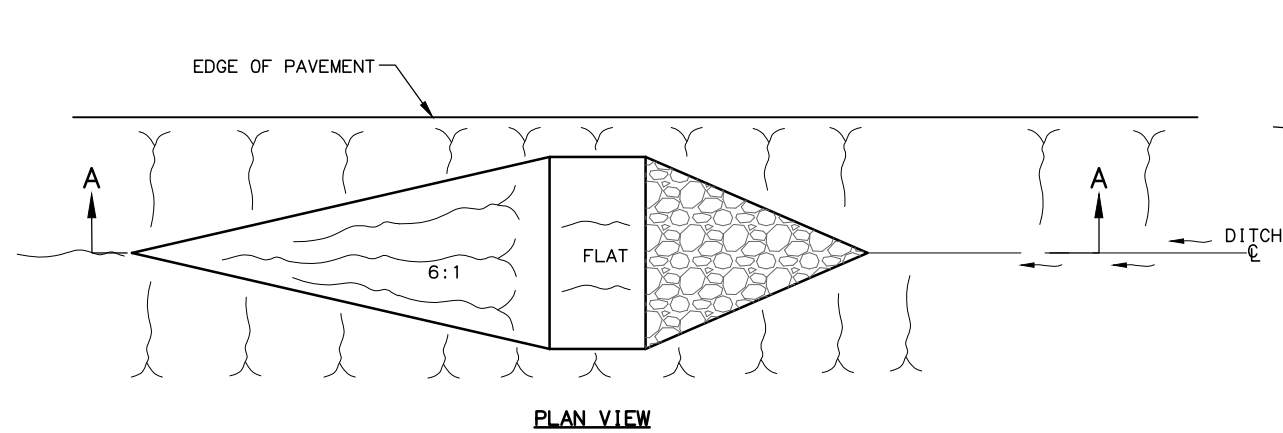
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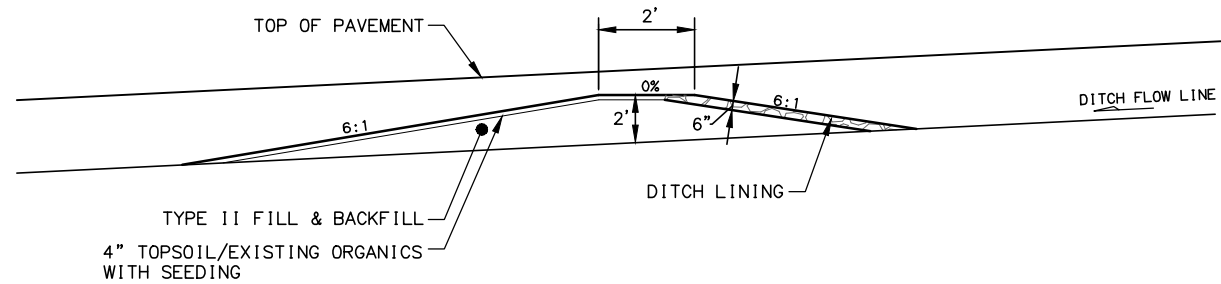
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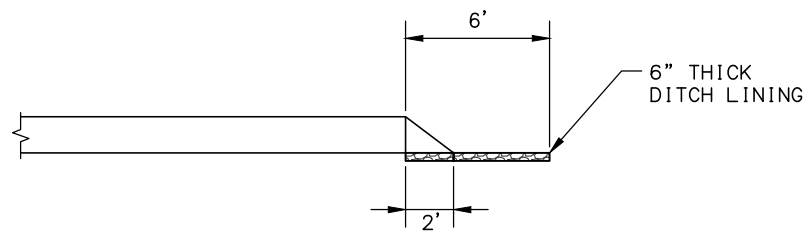
PLAN VIEW



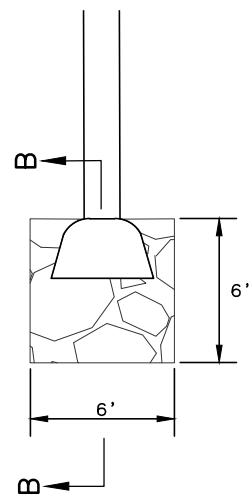
SECTION A-A

DITCH DIKE DETAIL

PAYMENT FOR CONSTRUCTING DITCH DIKE SHALL BE MADE UNDER THE TOPSOIL, DITCH LINING, AND TYPE II FILL AND BACK FILL ITEMS.

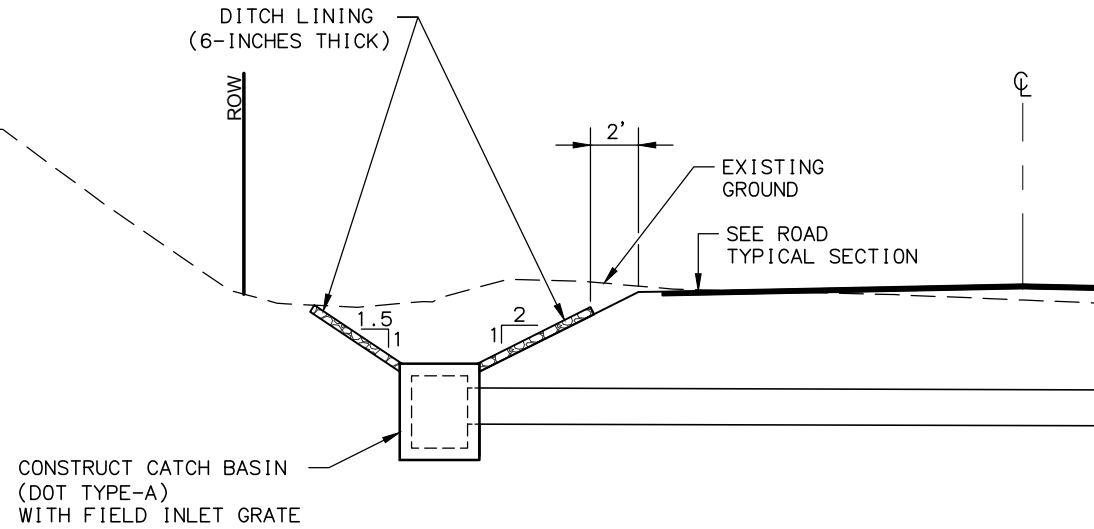


SECTION B-B

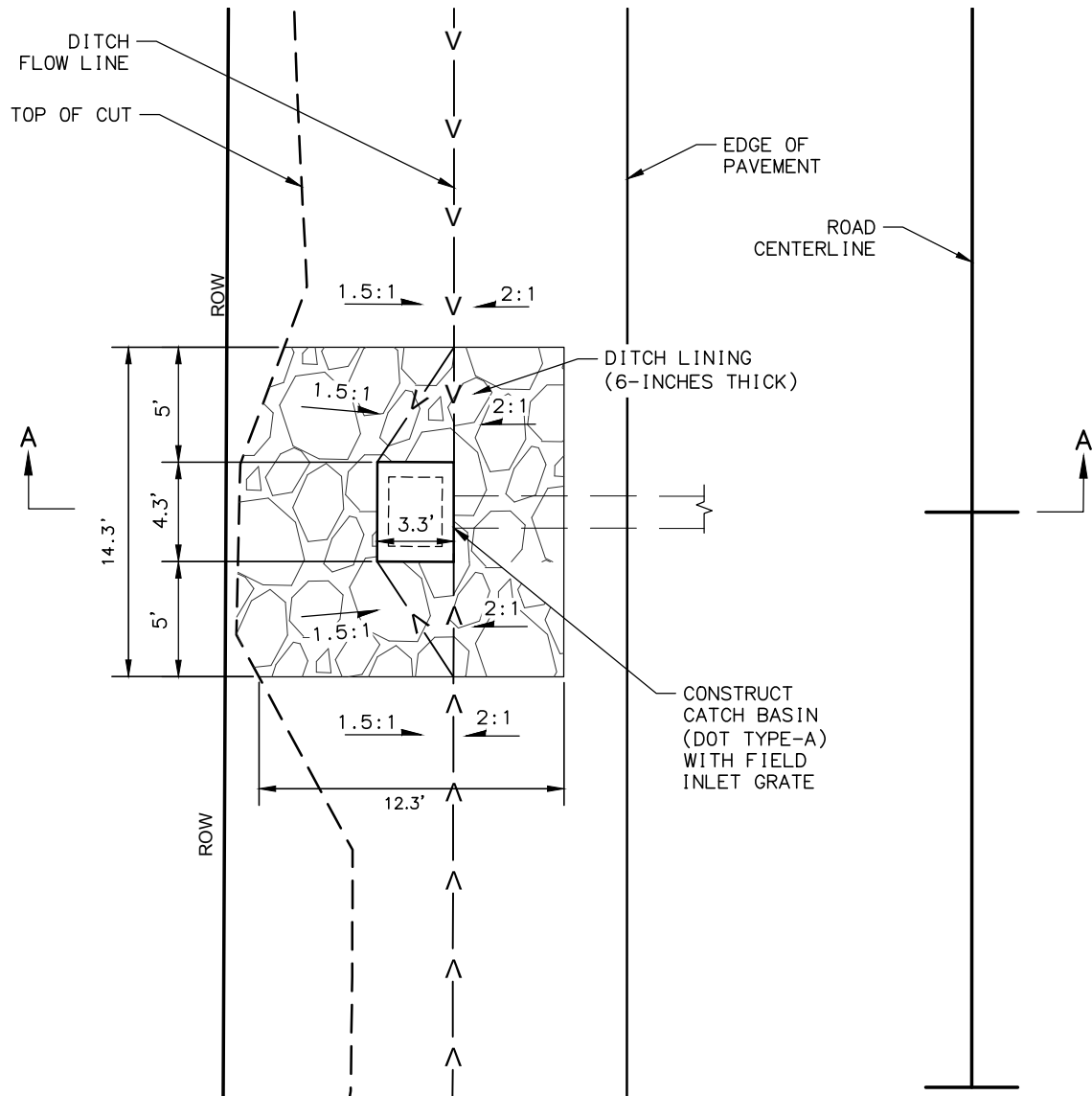


PLAN

DITCH LINING AT PIPE END



SECTION AA



PLAN

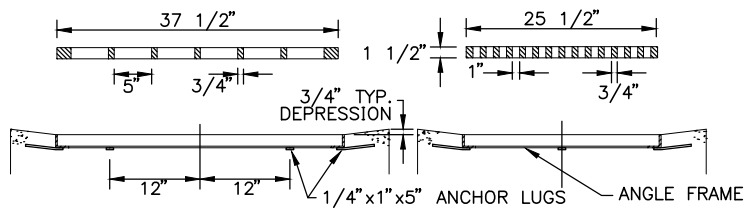
CATCH BASIN AND DITCH LINING DETAIL

S1-2 AND S2-1

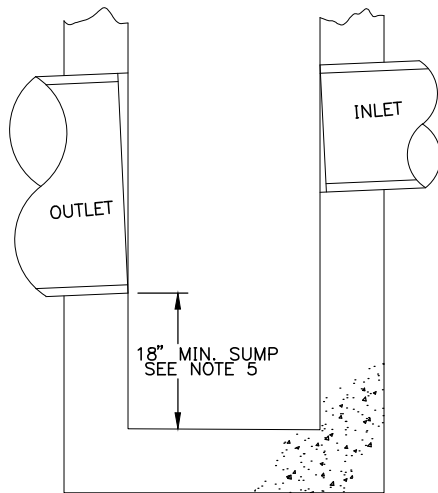
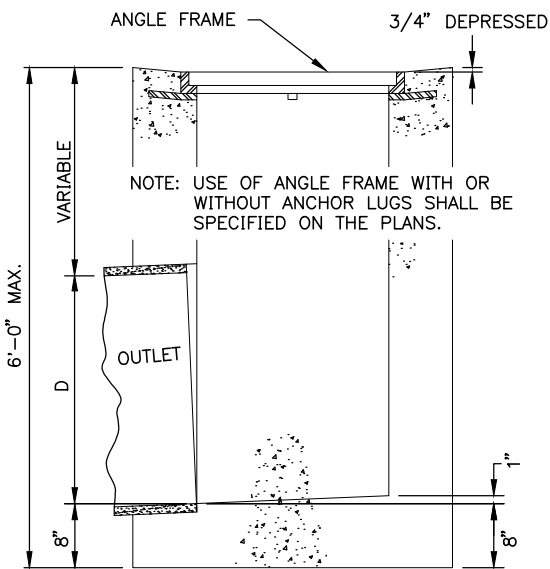
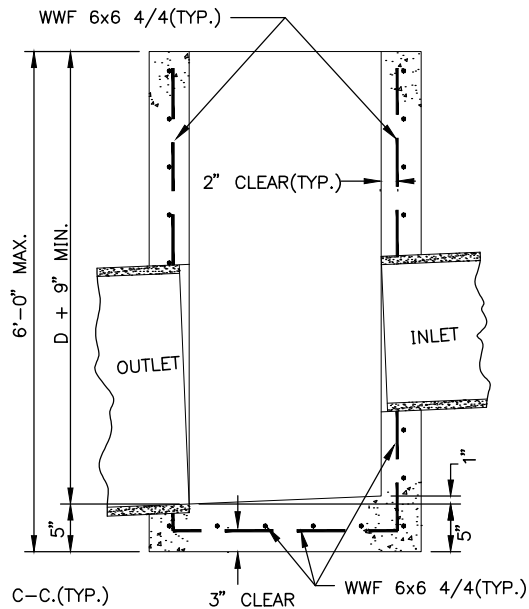
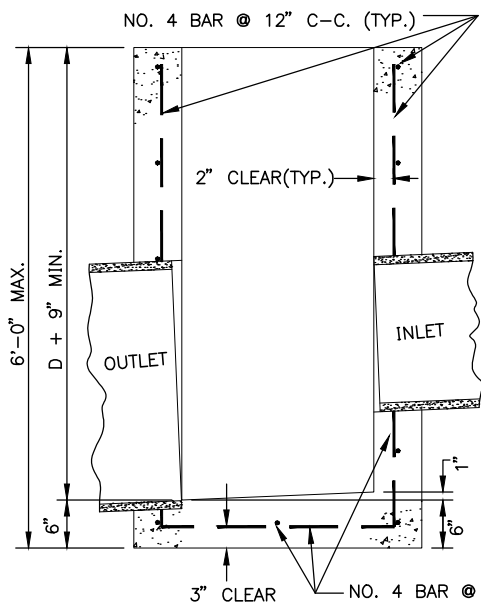
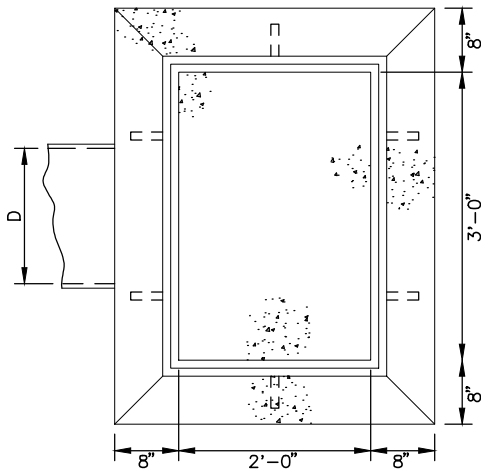
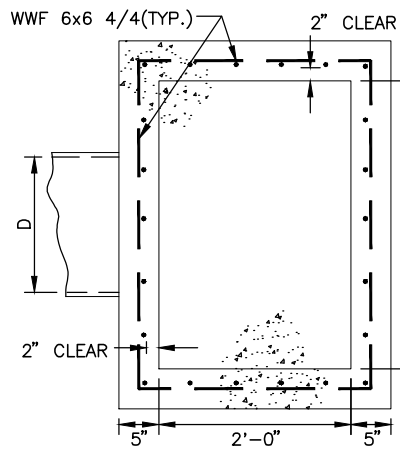
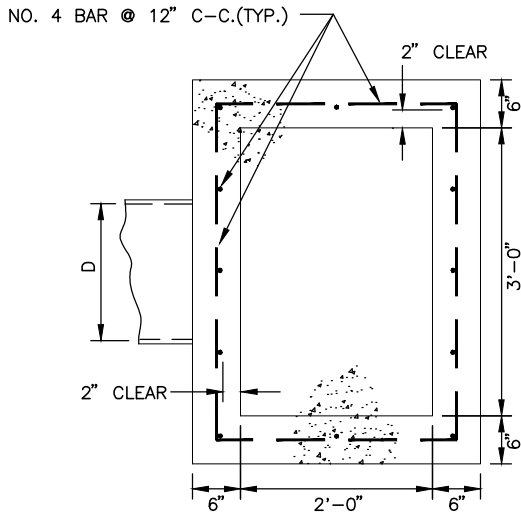
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SHEET NO.		TOTAL SHEETS
E2		29
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

- ## NOTES:
1. CAST IN PLACE CONCRETE INLET BOX SHALL BE ALASKA DOT CLASS "W" CONCRETE.
 2. CONCRETE INLET BOX LOCATION SHALL BE SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
 3. PRECAST OR REINFORCED CAST-IN-PLACE CONCRETE INLET BOXES MAY BE USED PROVIDED THEY ARE MODIFIED TO INCLUDE THE ANGLE FRAME AND IF APPROVED BY THE ENGINEER. PROVIDE SUBMITTAL FOR ONE OF THE CONCRETE INLET BOX TYPES TO THE ENGINEER FOR REVIEW AND APPROVAL.
 4. CONCRETE INLET BOX SHALL BE PARALLEL TO ROADWAY CENTERLINE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
 5. SUMP SHALL BE PROVIDED ON ALL STORM DRAIN STRUCTURES.
 6. PAYMENT TO FURNISH AND INSTALL THE CONCRETE INLET BOX AND FIELD INLET BOX FRAME AND GRATE SHALL BE MADE UNDER ITEM 806 CONSTRUCT CATCH BASIN.



NOTE: ALL ANGLE FRAME SHALL HAVE ANCHOR LUGS
FIELD INLET FRAME AND GRATE



REINFORCED
CAST IN PLACE

PRECAST

FIELD INLET BOX
CAST* IN PLACE

* MAY BE PRECAST OR REINFORCED
CAST-IN-PLACE BOX.

CONSTRUCT CATCH BASIN
DOT TYPE "A" CONCRETE INLET BOX TYPES

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CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

DETAILS

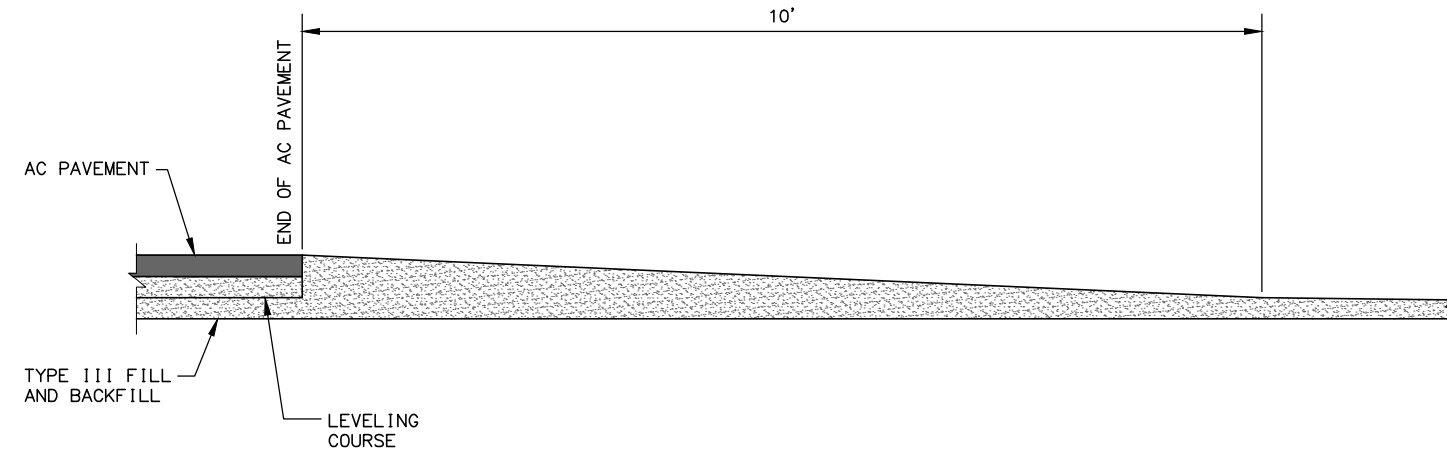
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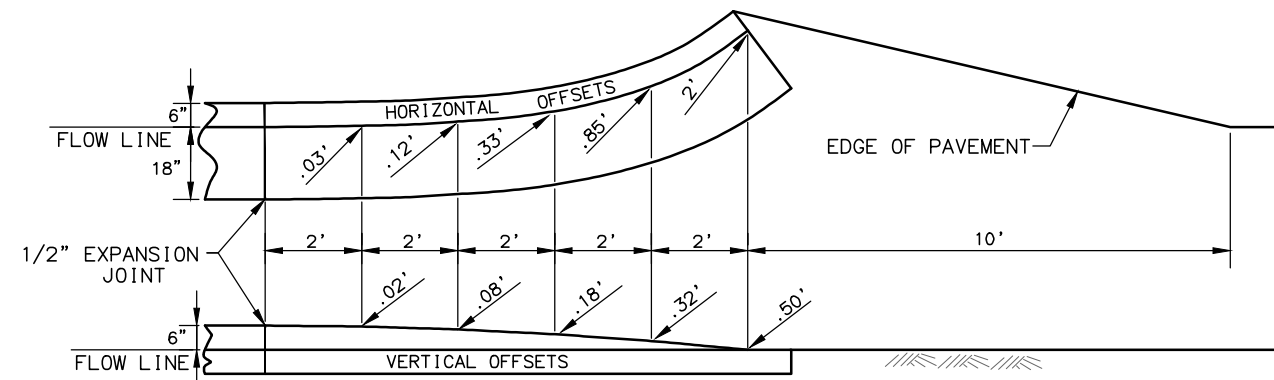
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AC PAVEMENT TO GRAVEL TRANSITION



CURB AND GUTTER TERMINATION TRANSITIONS

SHEET NO.		TOTAL SHEETS	
E3		29	
ADDENDUM NO.			
ATTACHMENT NO.			
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NO.	DATE	DESCRIPTION	

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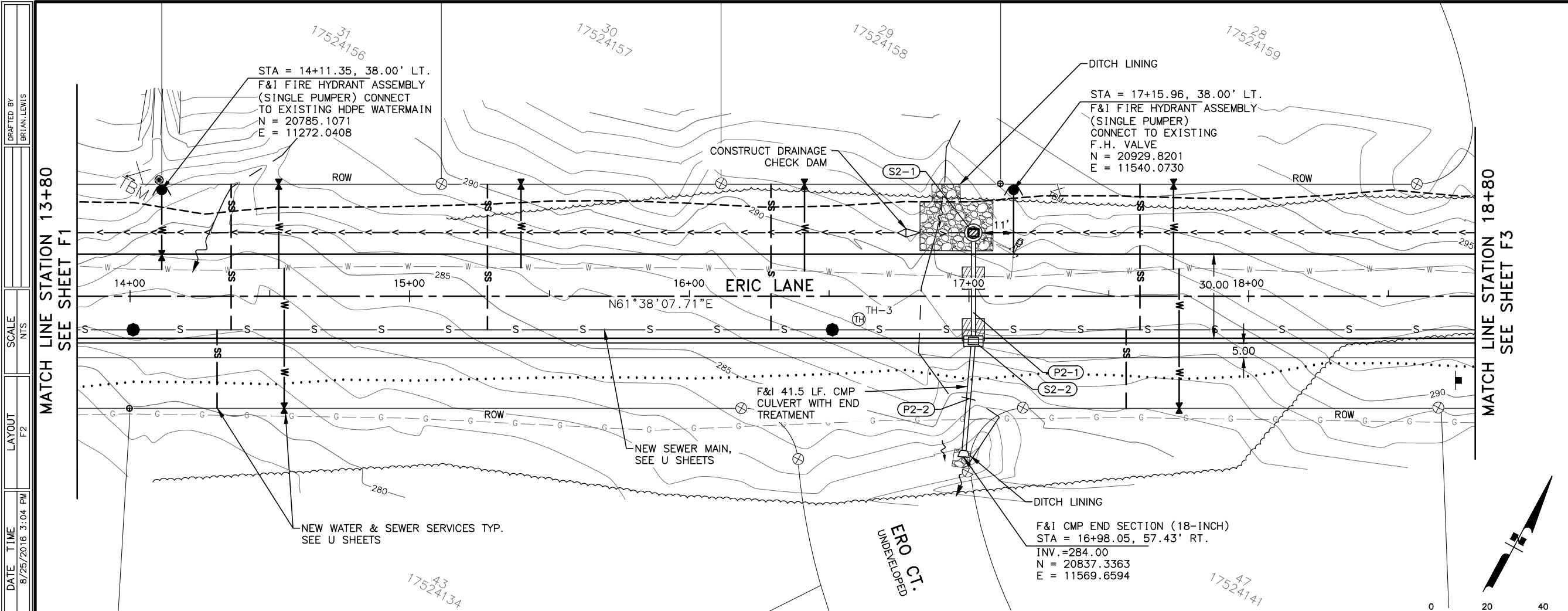
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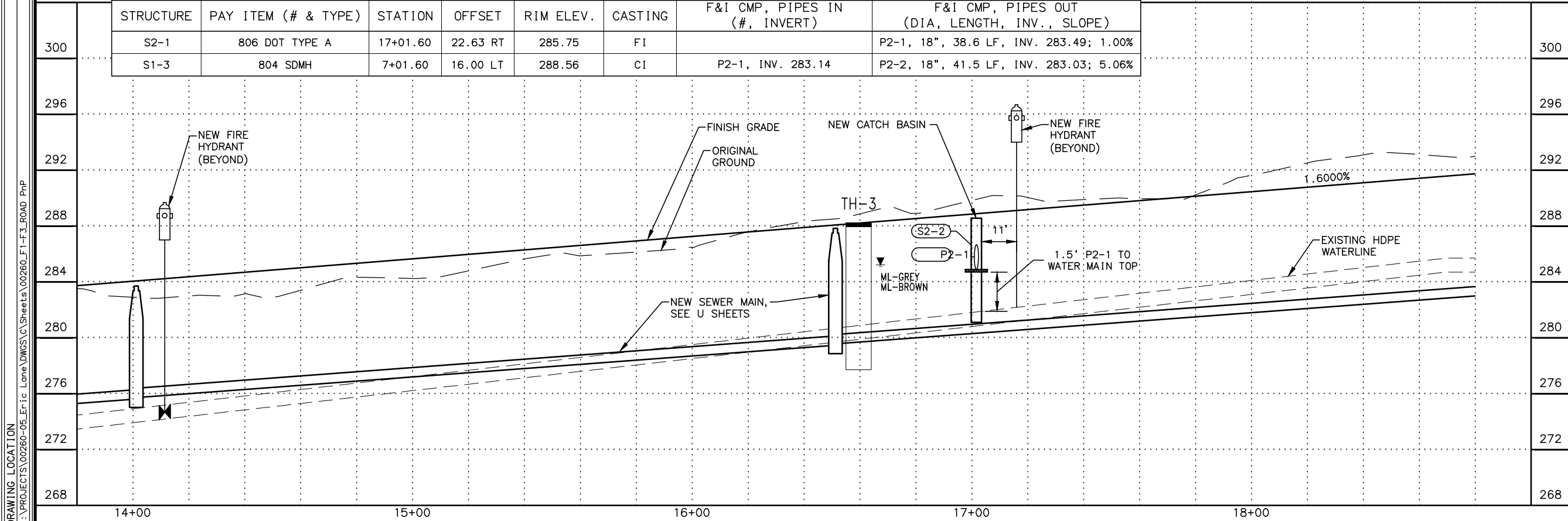
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DETAILS

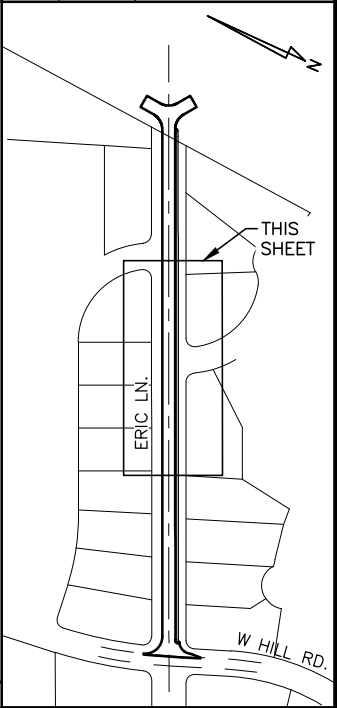


STORM DRAIN MANHOLE, CONSTRUCT CATCH BASIN, AND F&I CMP SUMMARY

STRUCTURE	PAY ITEM (# & TYPE)	STATION	OFFSET	RIM ELEV.	CASTING	F&I CMP, PIPES IN (#, INVERT)	F&I CMP, PIPES OUT (DIA, LENGTH, INV., SLOPE)
S2-1	806 DOT TYPE A	17+01.60	22.63 RT	285.75	FI		P2-1, 18", 38.6 LF, INV. 283.49; 1.00%
S1-3	804 SDMH	7+01.60	16.00 LT	288.56	CI	P2-1, INV. 283.14	P2-2, 18", 41.5 LF, INV. 283.03; 5.06%



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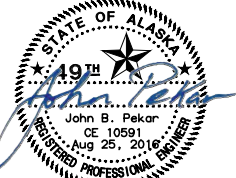


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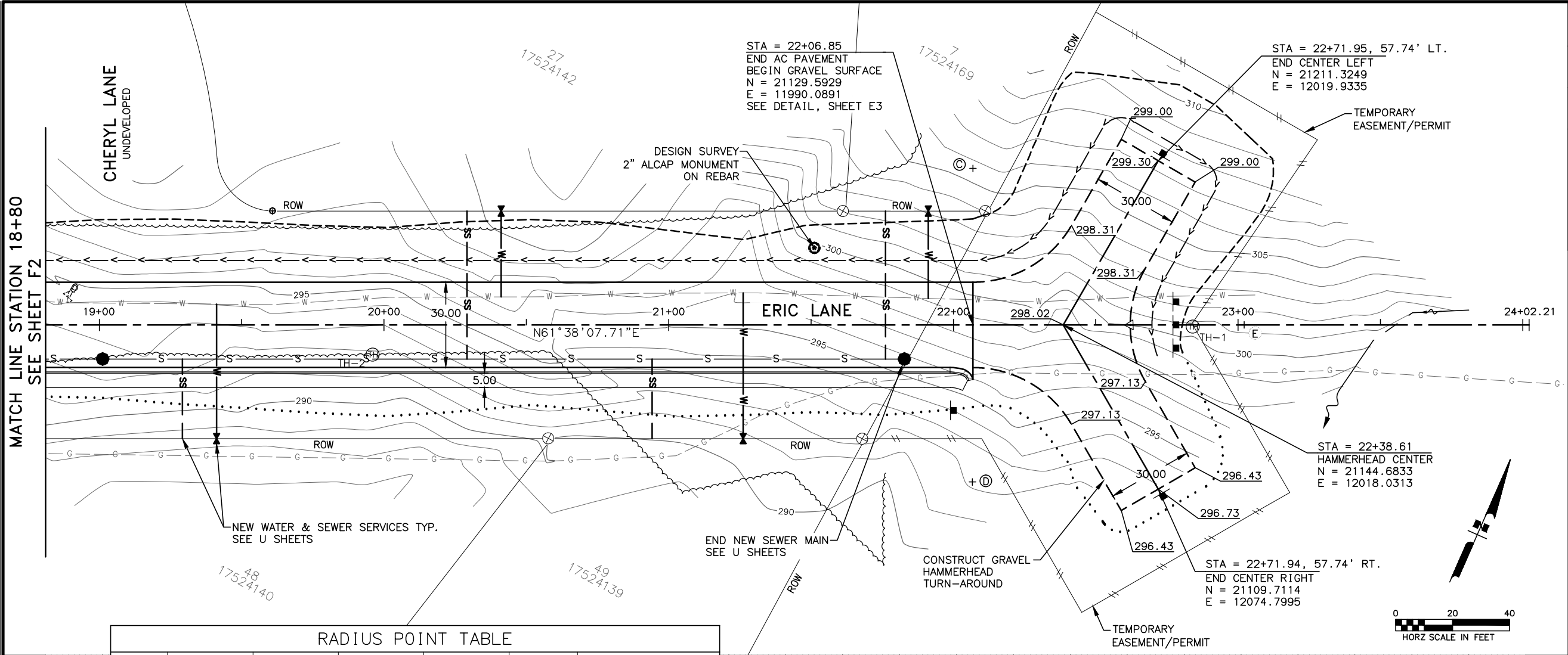
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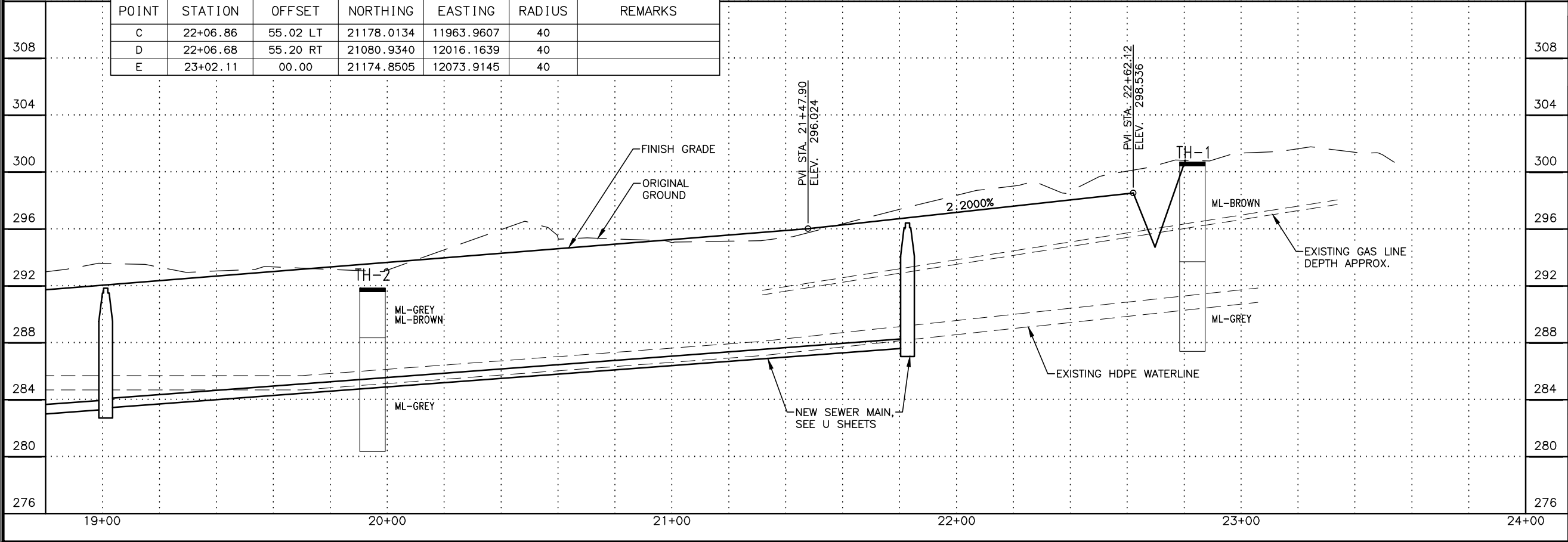
CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

PLAN AND PROFILE

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RADIUS POINT TABLE						
POINT	STATION	OFFSET	NORTHING	EASTING	RADIUS	REMARKS
C	22+06.86	55.02 LT	21178.0134	11963.9607	40	
D	22+06.68	55.20 RT	21080.9340	12016.1639	40	
E	23+02.11	00.00	21174.8505	12073.9145	40	



SHEET NO. F3TOTAL SHEETS F3

ADDENDUM NO.

ATTACHMENT NO.

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AUG 25, 2016
REGISTERED PROFESSIONAL ENGINEER

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ROAD AND SEWER
IMPROVEMENTS

PLAN AND PROFILE

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CL – CENTERLINE
NB – NORTH BOUND
EB – EAST BOUND
SB – SOUTH BOUND
WB – WEST BOUND

SIGNING & STRIPING NOTES:

- ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
 - PT MEANS A PERFORATED STEEL TUBE.
 - T MEANS A SQUARE STEEL TUBE.
 - P MEANS A ROUND STEEL PIPE.
 - W MEANS A WIDE FLANGE BEAM.
 - POPL MEANS A POLE PLATE INSTALLED PER ITS STANDARD DRAWING S-23
- FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE.
- FOR SIGNS SUPPORTED BY MULTIPLE POSTS, FABRICATE THE POSTS WITH THEIR TOPS LEVEL WITH ONE ANOTHER.
- FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD DRAWING. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
- FABRICATE GUIDE SIGNS ACCORDING TO THE SHOP DRAWINGS INCLUDED IN THE TECHNICAL SPECIFICATIONS. TRIM THE CORNERS OF ALL SIGNS TO THE RADIUS SHOWN ON EACH SHOP DRAWING.
- ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
- FOR SIGNS SUPPORTED BY MULTIPLE TUBES OR PIPES, LOCATE THE OUTER POSTS ON MAXIMUM SIX FEET CENTERS. INSTALL ADJACENT WIDE FLANGE POSTS ON MINIMUM EIGHT FEET CENTERS.
- SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER. UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
- FOR ALL FINAL PAVEMENT MARKINGS USE PAINT PER SPECIFICATION 402.
- DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT.
- IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.
- WHERE NEW STRIPING IS TO EXTEND BEYOND PAVING LIMITS, REMOVE EXISTING STRIPING, TO THE EXTENT OF STRIPING LIMITS.

SYMBOL LEGEND

EXISTING PROPOSED





SIGN POST & NUMBER

PAVEMENT MARKING LEGEND

PROPOSED



8"W

8" WHITE SOLID STRIPE



4"W

4" WHITE SOLID STRIP



4"Y

4" YELLOW SOLID STRIPE



24"W (TYP)

2' CROSSWALK OR STOPBAR



+20

STRIPING CHANGE STATION INTERVAL

SHEET NO.

H1

TOTAL SHEETS

29

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

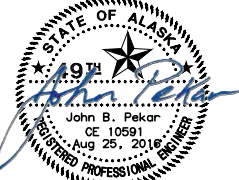
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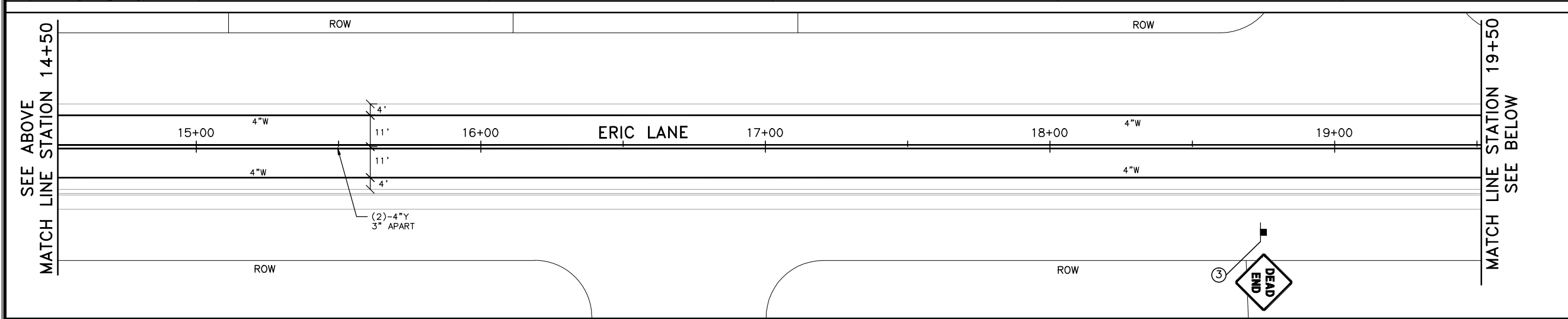
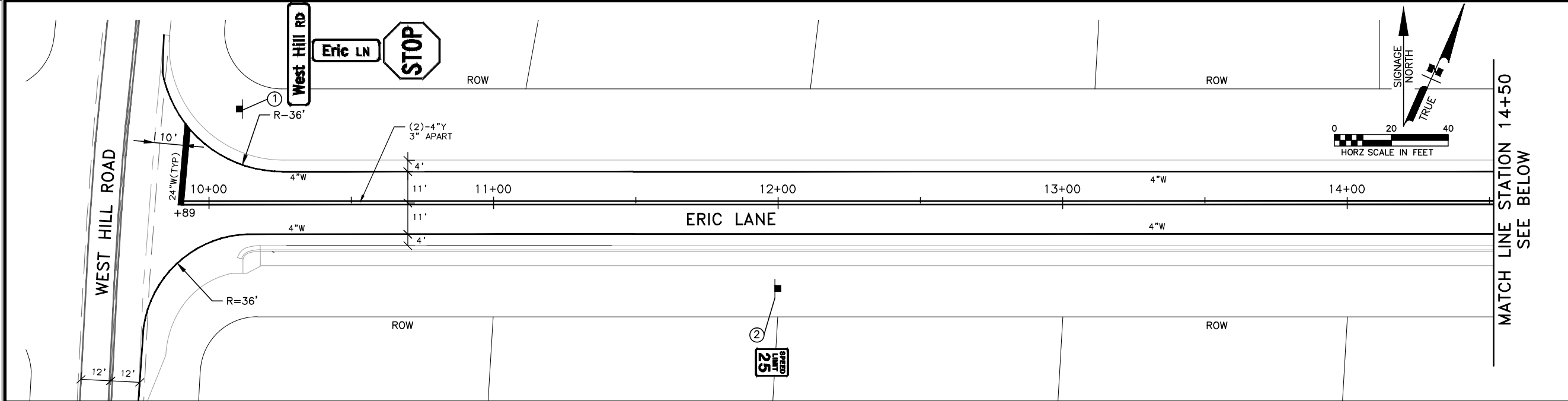
FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT



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CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
TRAFFIC LEGEND
AND NOTES

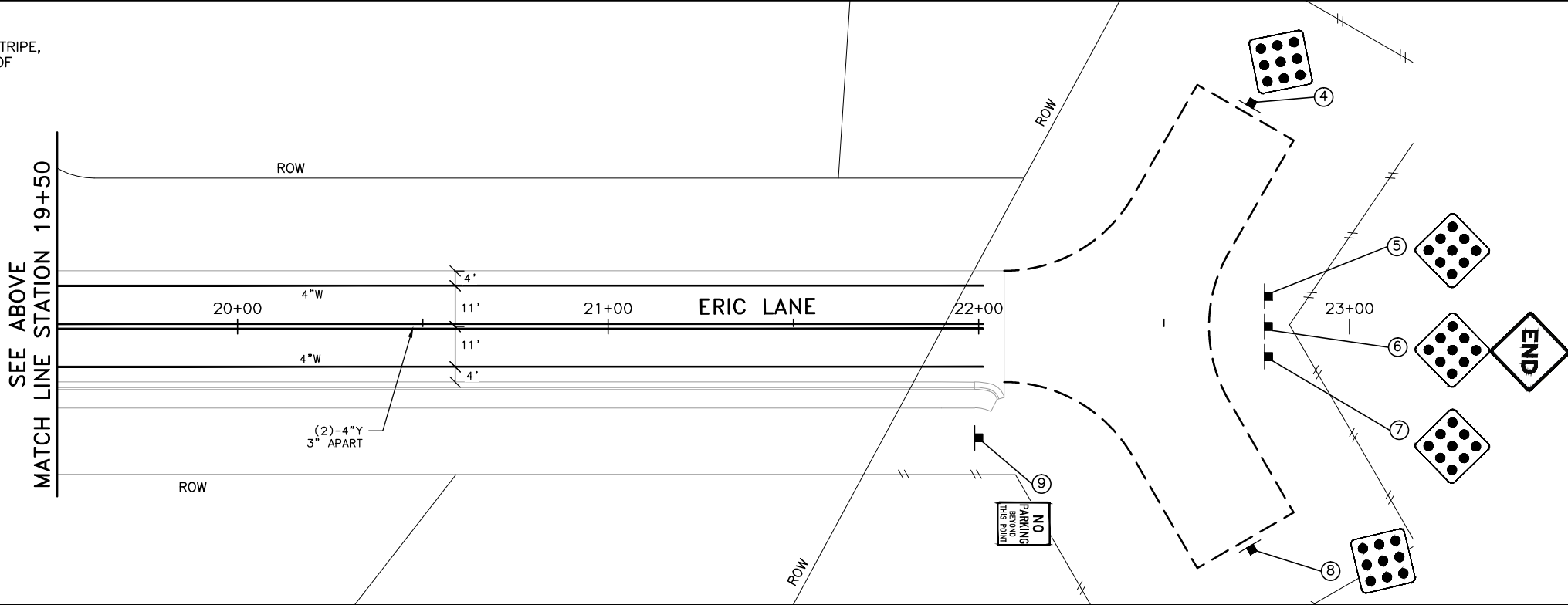


STRIPING NOTES:

1. DISTANCES SHOWN ARE TO CENTER OF SINGLE STRIPE, TO CENTER OF PAIR OF STRIPES, OR TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.

SIGNING NOTES:

1. # - SIGN POST NUMBER IN THE SIGN SUMMARY TABLES, SHEET H3.



SHEET NO.
H2

TOTAL SHEETS
29

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC
3909 Arctic Blvd, Suite 400
Anchorage, Alaska 99503
(907) 346-2373
CERT. OF AUTH. NO. AECL 1102

FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT

PHONE: (907) 235-3170
FAX: (907) 235-3145

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
SIGNING AND
STRIPING PLAN

DRAFTED BY
BRENDA BAKER

SCALE
NTS

LAYOUT
H3

DATE TIME
8/23/2016 2:01 PM

DRAWING LOCATION
Z:\PROJECTS\00260-05_Eric Lane\DWGS\00260-05_H3_SIGN_SUMMARY

SIGN SUMMARY													
SHEET NO.	POST NO.	LOCATION		TYPE	LEGEND	SIZE (FT)		AREA SQ FT	SIGN FACES	POSTS	THICKNESS (in)		REMARKS
		STATION	OFFSET			NO., SIZE, & TYPE	FRAMED						
							YES			NO			
H3	1	10+10.70	LT	D3-1D	West Hill RD	3.00	0.67	4.020	E/W	1-2.5" PT		0.125	2 SIGNS MOUNTED BACK TO BACK
				D3-1D	Eric LN	2.00	0.67	2.680	N/S			0.125	2 SIGNS MOUNTED BACK TO BACK
				R1-1	STOP	2.50	2.50	6.250	E			0.125	
H3	2	12+00.00	RT	R2-1	SPEED LIMIT 25	2.50	3.00	7.500	W	1-2.5 PT		0.125	
H3	3	18+75	RT	R14-1	DEAD END	2.50	3.00	7.500	W	1-2.5 PT		0.125	
H3	4	22+73.62	60.25' LT	OM4-1		1.50	1.50	2.250	S	1-2.5 PT		0.125	RED LEGEND
H3	5	22+78.16	8.02' LT	OM4-1		1.50	1.50	2.250	W	1-2.5 PT		0.125	RED LEGEND
H3	6	22+78.16	LT	W4-100	END	2.50	2.50	6.250	W	1-2.5 PT		0.125	
				OM4-1		1.50	1.50	2.250	W			0.125	REDLEGEND
H3	7	22+78.16	8.29' RT	OM4-1		1.50	1.50	2.250	W	1-2.5 PT		0.125	RED LEGEND
H3	8	22+73.67	60.38' RT	OM4-1		1.50	1.50	2.250	N	1-2.5 PT		0.125	RED LEGEND
H3	9	22+00.00	RT	R8-100	NO PARKING BEYOND THIS POINT	2.50	2.50	6.250	W	1-2.5 PT		0.125	
TOTAL SIGN AREA:								43.20 SF					

SHEET NO.
H3

TOTAL SHEETS
29

ADDENDUM NO.

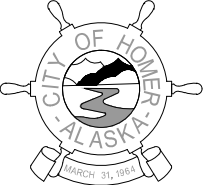
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REVISIONS

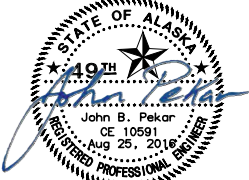
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FOR
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PUBLIC WORKS DEPARTMENT



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John B. Pekar
CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

SIGN SUMMARY

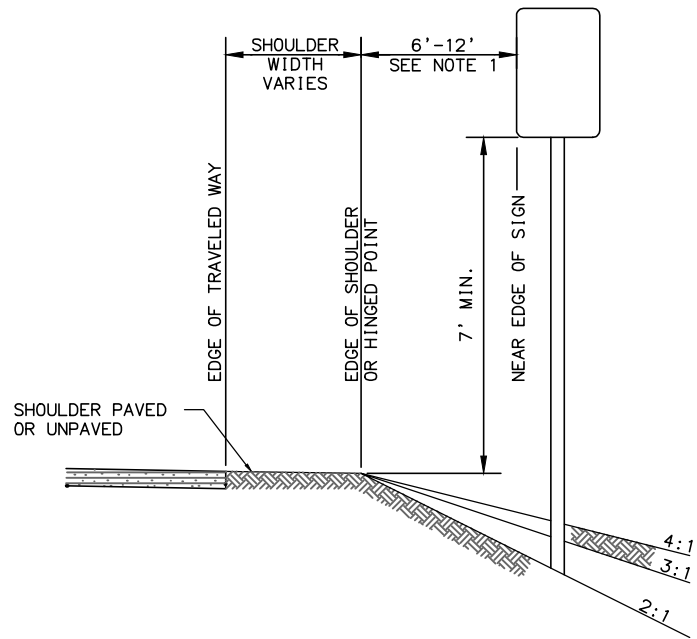
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BRENDA BAKER

SCALE
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LAYOUT
H4

DATE TIME
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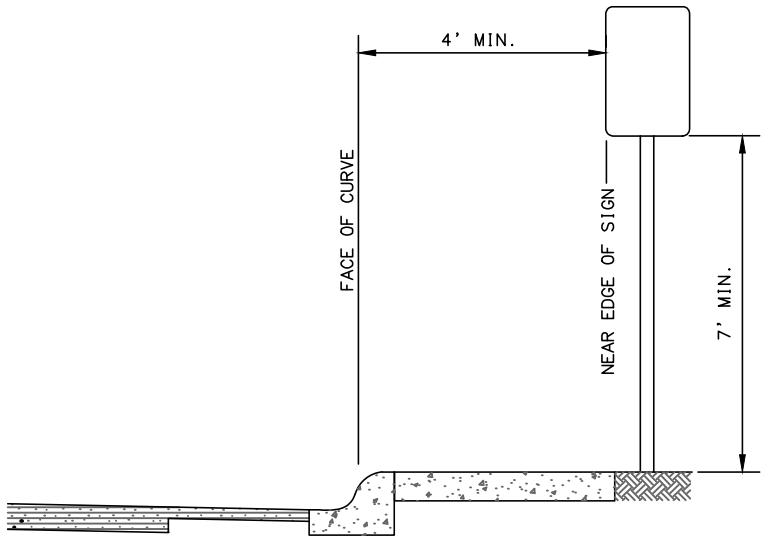
DRAWING LOCATION
Z:\PROJECTS\00260-05.Eric Lane\DWGS\00260-H3_SIGN DETAILS



NOTES:

1. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, THE STANDARD SIGN OFFSET IS 12'. THE MINIMUM IS 6'.
2. IF SIGNS EXTEND OVER SIDEWALKS, THE MINIMUM VERTICAL CLEARANCE IS 7'-0".
3. ADD 6" TO MOUNTING HEIGHT ON UNPAVED ROADS.
4. IF SIGNS EXTEND OVER BIKE PATHS, THE MINIMUM VERTICAL CLEARANCE IS 8'-0".
5. PAINT ALL SIGN MOUNTING FASTENERS ON SIGN FACE A COLOR MATCHING THE SIGN FACE.
6. ATTACH ALL SIGNS ZEES AND BRACES MOUNTED TO THE POST WITH 5/16" BOLTS WITH SELF-LOCKING NUTS.

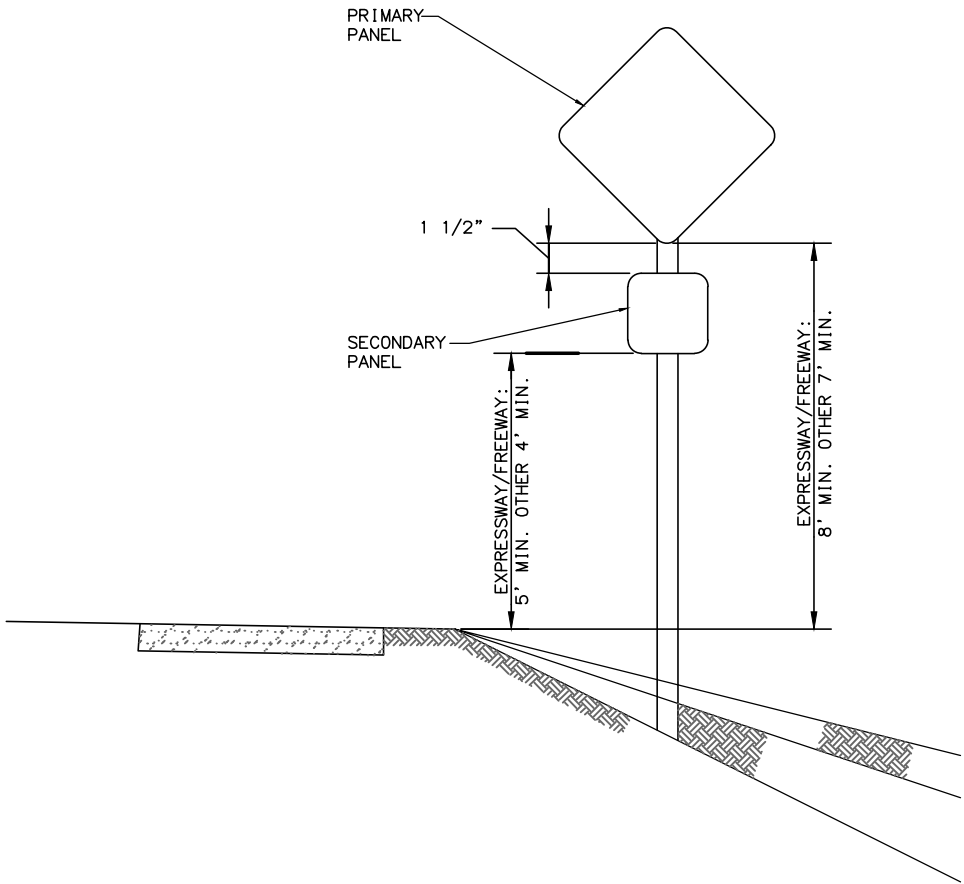
POST MOUNTED SIGN WITH SHOULDER



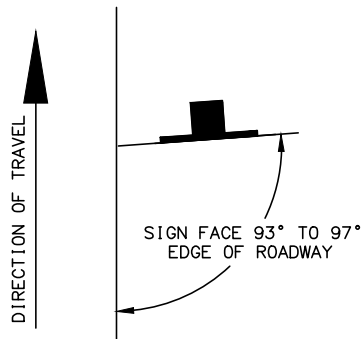
NOTE:

1. SIGN FACE SHALL BE PLACED OUTSIDE SIDEWALK EXCEPT WHEN ROW LIMITATION EXIST: FOR EXAMPLE IN THE CENTRAL BUSINESS DISTRICT OR OTHER SIMILAR DISTRICTS.

POST MOUNTED SIGN CURB WITH SIDEWALK WITHOUT PARKWAY



SECONDARY PANEL HEIGHT ALL TWO PANEL MOUNTING



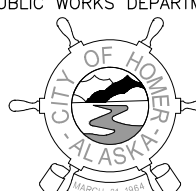
SIGN POSITIONING

POST MOUNTED SIGN, SECONDARY PANEL HEIGHT AND SIGN POSITIONING

SHEET NO.		TOTAL SHEETS	
H4		29	
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

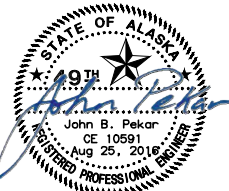
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FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT



MARCH 31, 1984

PHONE: (907) 235-3170
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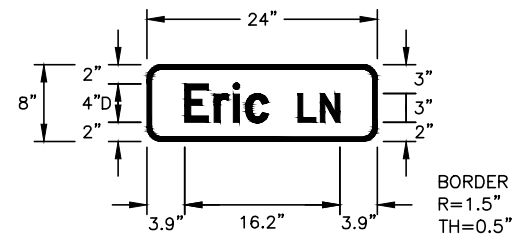


John B. Pekar
CE 10591
Aug 25, 2018
REGISTERED PROFESSIONAL ENGINEER

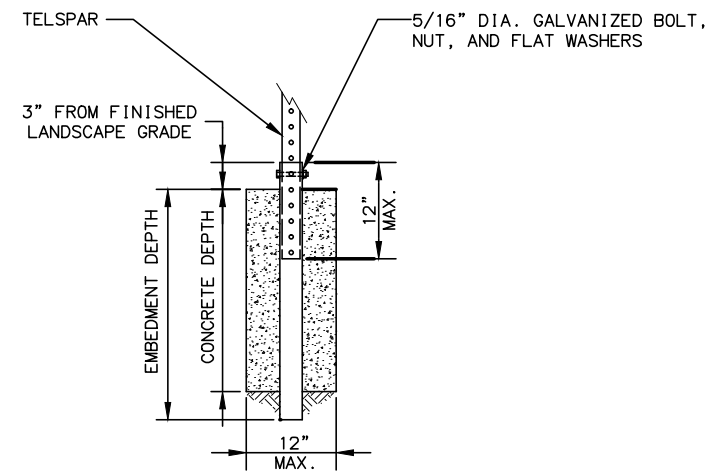
CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

SIGN DETAILS

DRAWING LOCATION		DATE	TIME	LAYOUT	SCALE	DRAFTED BY
Z:\PROJECTS\00260-05_Er.c Lane\DWGS\00260-H3_SIGN DETAILS		8/25/2016	8:29 AM	H5	NTS	BRENDA BAKER

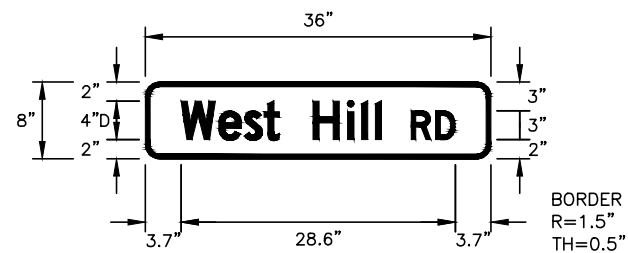


SIGN DETAIL

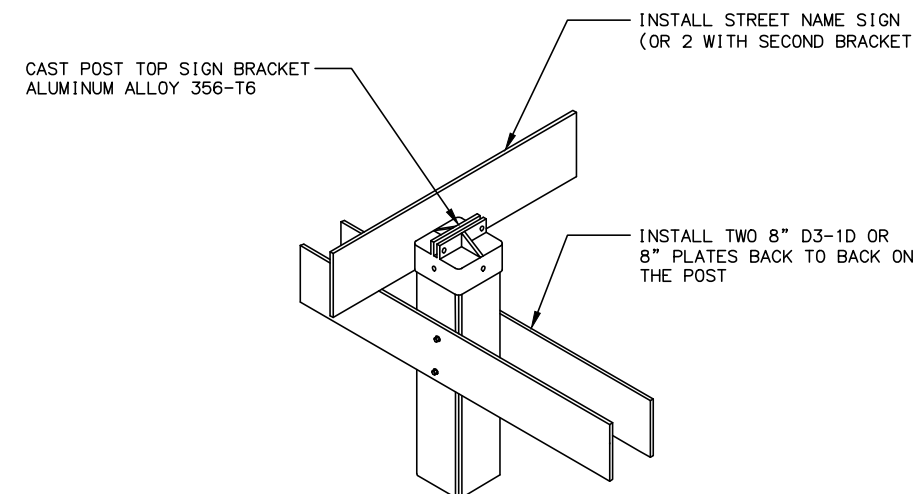


CONCRETE FOUNDATION FOR SIGN POST

PERFORATED STEEL TUBES (P.S.T.)			
(12 GA.- .105 WALL THICKNESS)			
SIGN SURFACE AREA SQ. FT.	POST SIZE	EMBEDMENT DEPTH	CONCRETE DEPT
7' OR LESS	2" X 2"	27"	24"
GREATER THAN 7'	2 1/2" X 2 1/2"	33"	30"



SIGN DETAIL



8" PLATE INSTALLATION DETAIL WITH SUPPLEMENTAL 8" D3-1D SIGNS

SHEET NO.		TOTAL SHEETS	
H5		29	
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

DRAFTED BY
SOPHIA RUFF

SCALE
NTS

LAYOUT
U1

DATE TIME
8/25/2016 3:38 PM

DRAWING LOCATION
Z:\PROJECTS\00260-05_Eric Lane\DWGS\C\Sheets\00260_U1-U2_TRENCH AND NOTES

SPEC NO. 502

FURNISH AND INSTALL SEWER PIPE

SHEET	BEGIN STA. ②	END STA. ②	LENGTH (FEET)	NOTES
U3	110+19.48	111+51.15	132	
U3-U4	111+51.15	114+01.15	250	
U4	114+01.15	116+51.15	250	
U4-U5	116+51.15	119+01.15	250	
U5	119+01.15	121+82.77	282	
		TOTAL	1163	

SPEC NO. 503

CONSTRUCT MANHOLE

SHEET	STRUCTURE NO.	DIAMETER (FT)	TYPE	REMARKS
U3	SSMH-1	4	A	CONNECT TO EXISTING MAIN. SEE HORSE SHOE DETAIL ON SHEET U8.
U3	SSMH-2	4	A	
U3	SSMH-3	4	A	
U4	SSMH-4	4	A	
U4	SSMH-5	4	A	
U5	SSMH-6	4	A	
U5	SSMH-7	4	A	
		TOTAL	7	

SPEC NO. 604

FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY (SINGLE PUMPER)

SHEET	STATION ②	OFFSET	QTY	REMARKS
U4	103+35	50 LT	1	CONNECT TO EXISTING HDPE WATER MAIN.
U4	106+40	50 LT	1	CONNECT TO EXISTING VALVE AT FIRE HYDRANT STUBOUT.
		TOTAL	2	

SPEC NO. 607

ADJUST VALVE BOX TO FINISH GRADE

SHEET	STATION ①	OFFSET	QTY	REMARKS
U3	99+31	16 LT	1	
U3	99+33	31 LT	1	
U3	99+40	22 LT	1	
U4	108+13	22 LT	1	
		TOTAL	4	

UTILITY NOTES:

1. MAINTAIN A MINIMUM OF TEN (10) FEET HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER MAINS AND SERVICES. A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES SHALL BE MAINTAINED AT ALL WATER/SEWER CROSSINGS.
2. MAINTAIN A MINIMUM OF 36-INCHES OF VERTICAL SEPARATION BETWEEN ANY STORM SEWER (STORM DRAIN OR FOOTING DRAIN) AND WATERLINE (MAINS OR SERVICES) OR SANITARY SEWER (MAINS OR SERVICES). IF 36-INCHES CANNOT BE MAINTAINED, PROVIDE A MINIMUM OF 4-INCH THICK INSULATION.
3. ALL WATER/SEWER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE, MIN. 60 P.S.I., FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.
4. CONTRACTOR SHALL VERIFY AND RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD AND RECORD ANY CHANGES ON THE CONTRACTOR RECORD DRAWINGS.
5. IN CASE OF CONFLICT BETWEEN STATIONING LOCATION OF PIPE OR FITTINGS, USE DIMENSIONED LOCATIONS RELATIVE TO THE CENTERLINE OR PROPERTY LINE, THE DIMENSIONED LOCATIONS SHALL GOVERN.
6. ALL MANHOLES SHALL HAVE A MINIMUM OF ONE-SIX (6") INCH GRADE RING. MAXIMUM GRADE RING ADJUSTMENT SHALL NOT EXCEED EIGHTEEN (18") INCHES.
7. ALL SANITARY SEWER MAINS SHALL BE CLASS 50, DUCTILE IRON PIPE.
8. SANITARY SEWER SERVICES SHALL BE 4-INCHES UNLESS NOTED ON PLANS WITH A MINIMUM SLOPE FOR 6-INCH SERVICES TO BE 1% AND FOR 4-INCH SERVICES TO BE 2%.
9. SANITARY SEWER SERVICES SHALL BE PLACED NO CLOSER THAN: 15 FEET HORIZONTALLY MEASURED TO ANY FIRE HYDRANT OR FIRE HYDRANT LEG; 10 FEET HORIZONTALLY MEASURED TO ANY WATER MAIN, WATER SERVICE, STORM SEWER, FOOTING DRAIN, STREET LIGHT, TRANSFORMER PAD, ELECTRICAL/TELEPHONE/CABLE BOX; AND 5 FEET HORIZONTALLY MEASURED TO ANY SIDE LOT LINE.
10. ALL BEDDING SHALL BE NATIVE MATERIAL MEETING THE REQUIREMENTS OF CLASS C BEDDING MATERIAL, TO CONFORM WITH ADEC TYPE 4/5 BEDDING REQUIREMENTS.
11. SEWER MAIN, SERVICE TRENCHES AND BEDDING SHALL BE COMPACTED TO MIN. OF 95% OF MAXIMUM DENSITY.
12. THE CONTRACTOR SHALL RELOCATE ANY SEWER SERVICE CONNECTIONS INSTALLED WITH LESS THAN MINIMUM STANDARD MEASURED DISTANCES PRIOR TO FINAL ACCEPTANCE BY COH.
13. WATER SERVICE MATERIALS - WATER SERVICE PIPING BETWEEN ONE-INCH AND TWO-INCHES SHALL BE SOFT DRAWN SEAMLESS COPPER TYPE K. COPPER PIPING SHALL BE SUPPLIED WITH TYPE STAMPED ON EXTERIOR. WATER SERVICE CONNECTION PIPING LARGER THAN TWO INCHES SHALL BE HDPE SDR11. GATE VALVES FOR HDPE WATER SERVICE CONNECTIONS SHALL HAVE THE SAME NOMINAL DIAMETER AS THE SERVICE PIPING AND SHALL HAVE MJ/FLANGE CONNECTIONS AS DESCRIBED HEREIN.
14. WHERE STORM DRAIN OR SANITARY SEWER CROSS WATER MAINS, THERE SHALL BE A MINIMUM OF 9 FEET SEPARATION BETWEEN ALL PIPE JOINTS.
15. ALL WATER SYSTEM COMPONENTS IN DIRECT CONTACT WITH THE POTABLE WATER SUPPLY SHALL MEET THE REQUIREMENTS OF NATIONAL SANITATION FOUNDATION (NSF) STANDARDS 61.
16. ALL POTABLE WATER PIPELINES AND SERVICES SHALL BE DISINFECTED IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI/AWWA C651.
17. WATER MAIN AND SERVICES SHALL BE BURIED A MINIMUM OF 7 FEET. ALL WATER AND SERVICE LINES LESS THAN 7 FEET SHALL BE INSULATED.

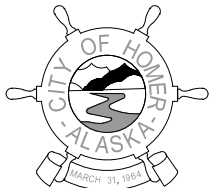
NOTES:

- ① BASIS OF STATIONING IS CENTER LINE OF ROADWAY.
- ② BASIS OF STATIONING IS CENTER LINE OF SEWER MAIN.

SHEET NO.		TOTAL SHEETS	
U1		29	
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

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CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

UTILITY NOTES AND
SUMMARY TABLES

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U2

DATE TIME
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DRAWING LOCATION
Z:\PROJECTS\00260-05_Eric Lane\DWGS\C\Sheets\00260_U1-U2_TRENCH AND NOTES

SPEC NO. 510

SANITARY SEWER SERVICE CONNECTION (4-INCH)

SVC. NO.	PARCEL I.D.	LOT	SHEET NO.	SEWER SERVICE STATION @ MAIN		OFFSET ①	B.O.P. @ PL	T.O.P. @ MAIN	SVC	AS BUILT COORDINATES ②	
				① DESIGN	ASBUILT ②		ASBUILT ②	ASBUILT ②		NORTH	EAST
1	17524152	35	U4	10+32		40 LT			4" DIP		
2	17524124	39	U4	10+55		40 RT			4" DIP		
3	17524123	40	U4	11+19		40 RT			4" DIP		
4	17524153	34	U4	11+24		40 LT			4" DIP		
5	17524154	33	U4	12+19		40 LT			4" DIP		
6	17524122	41	U4	12+36		40 RT			4" DIP		
7	17524121	42	U4	13+36		40 RT			4" DIP		
8	17524155	32	U4	13+51		40 LT			4" DIP		
9	17524134	43	U5	14+31		40 RT			4" DIP		
10	17524156	31	U5	14+36		40 LT			4" DIP		
11	17524157	30	U5	15+27		40 LT			4" DIP		
12	17524158	29	U5	16+29		40 LT			4" DIP		
13	17524141	47	U5	17+56		40 RT			4" DIP		
14	17524159	28	U5	17+61		40 LT			4" DIP		
15	17524140	48	U6	19+29		40 RT			4" DIP		
16	17524142	27	U6	20+29		40 LT			4" DIP		
17	17524139	49	U6	20+94		40 RT			4" DIP		
18	17524169	7	U6	21+76		40 LT			4" DIP		

SPEC NO. 606

WATER SERVICE CONNECTION

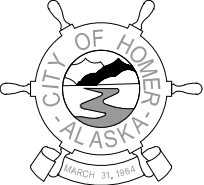
SVC. NO.	PARCEL I.D.	LOT	SHEET NO.	WATER SERVICE STATION @ MAIN		OFFSET ①	B.O.P. @ PL	T.O.P. @ MAIN	SVC	AS BUILT COORDINATES ②	
				① DESIGN	ASBUILT ②		ASBUILT ②	ASBUILT ②		NORTH	EAST
1	17524124	39	U4	10+67		40 RT			1-1/4" PE		
2	17524153	34	U4	11+36		40 LT			1-1/4" PE		
3	17524123	40	U4	11+38		40 RT			1-1/4" PE		
4	17524154	33	U4	12+34		40 LT			1-1/4" PE		
5	17524122	41	U4	12+63		40 RT			1-1/4" PE		
6	17524155	32	U4	13+53		40 LT			1-1/4" PE		
7	17524121	42	U4	13+55		40 RT			1-1/4" PE		
8	17524156	31	U5	14+53		40 LT			1-1/4" PE		
9	17524134	43	U5	14+55		40 RT			1-1/4" PE		
10	17524157	30	U5	15+40		40 LT			1-1/4" PE		
11	17524158	29	U5	16+41		40 LT			1-1/4" PE		
12	17524159	28	U5	17+73		40 LT			1-1/4" PE		
13	17524141	47	U5	17+75		40 RT			1-1/4" PE		
14	17524140	48	U6	19+41		40 RT			1-1/4" PE		
15	17524142	27	U6	20+41		40 LT			1-1/4" PE		
16	17524139	49	U6	21+26		40 RT			1-1/4" PE		
17	17524169	7	U6	21+91		40 LT			1-1/4" PE		

SHEET NO.		TOTAL SHEETS
U2		29
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

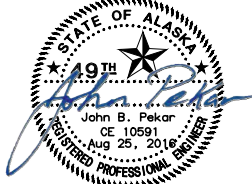
- NOTES:
- ① BASIS OF STATIONING IS CENTER LINE OF ROADWAY.
- ② TO BE COMPLETED BY C.O.H. AND OR PROJECT INSPECTOR.

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CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

WATER AND SEWER
CONNECTION TABLES

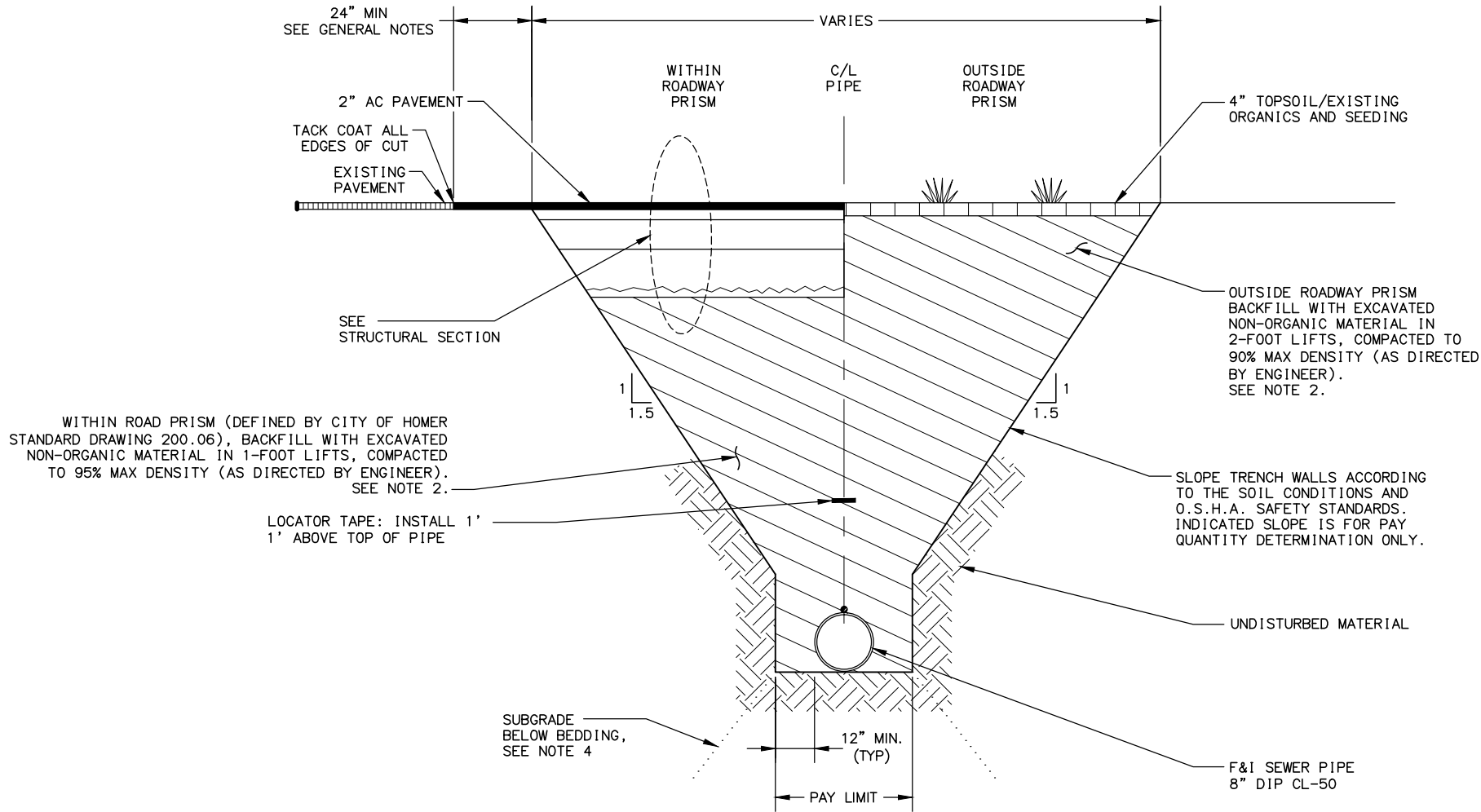
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DRAWING LOCATION
Z:\PROJECTS\00260-05_Eric Lane\DWG\00260-U1-U2_TRENCH AND NOTES



TRENCH SECTION NOTES

1. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. PROVIDE PORTABLE STEEL TRENCH SHIELD AS REQUIRED.
2. FOUNDATION MATERIAL FOR TRENCH BACKFILL SHALL BE NATIVE MATERIAL, MEETING TYPE II CLASSIFICATION (MINIMUM) AS APPROVED BY THE ENGINEER. NATIVE MATERIAL NOT MEETING TYPE II CLASSIFICATION SHALL BE REMOVED AND REPLACED WITH TYPE II FILL AND BACKFILL. BACKFILL MATERIAL WITHIN ROADWAY PRISM SHALL HAVE 8" MAXIMUM ROCK SIZE. SEE STANDARD DETAIL 200.06.
3. REMOVE AND PROPERLY DISPOSE OF ALL ORGANIC MATERIALS.
4. SUBGRADE BELOW BEDDING PRISM SHALL BE CLEARED OF ALL DEBRIS AND ORGANIC MATERIAL. BACKFILL AND COMPACT EXCAVATED SUBGRADE.
5. BED PIPE PER STANDARD DETAIL 200.07

SHEET NO.		TOTAL SHEETS
U3		29
ADDENDUM NO.		
ATTACHMENT NO.		
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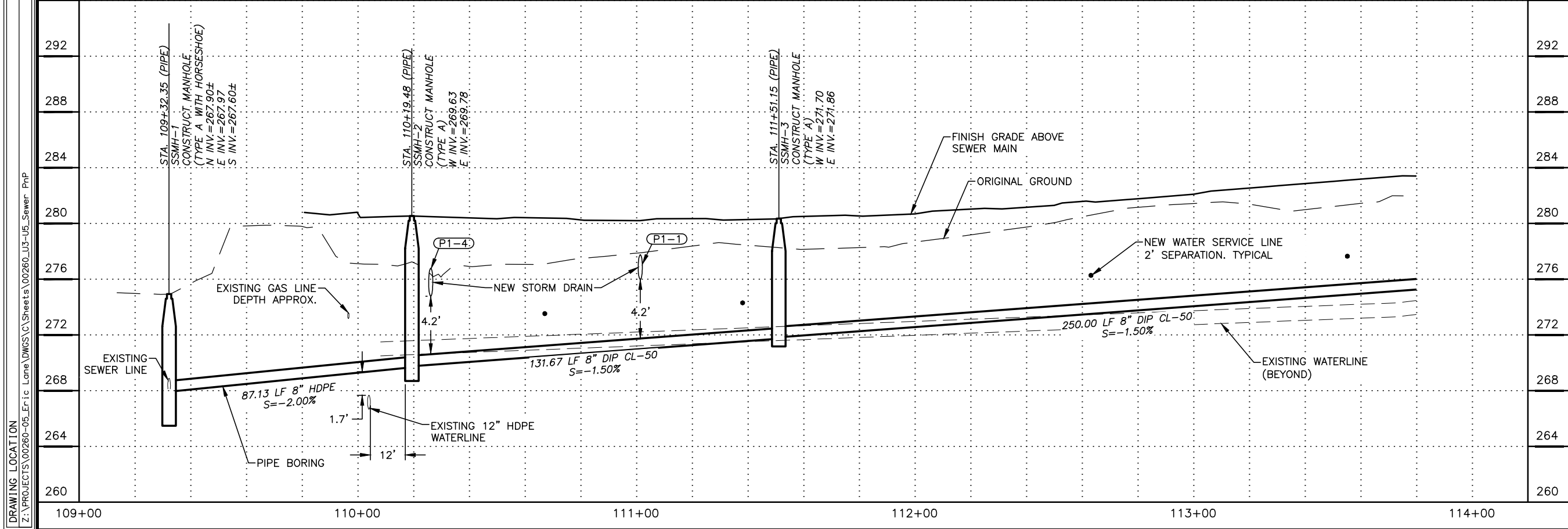
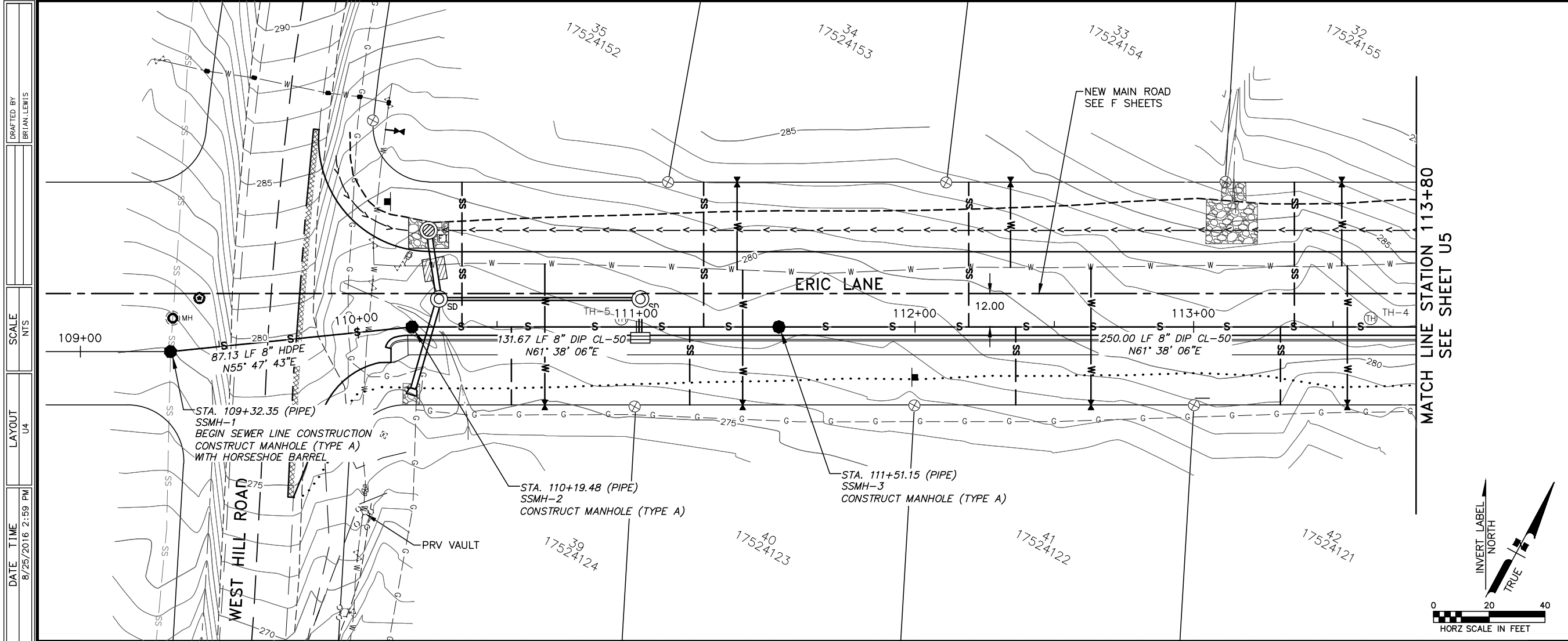
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John B. Pekar
CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS

TRENCH DETAIL



SHEET NO.		TOTAL SHEETS	
U4		U6	
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

THIS SHEET

W HILL RD.

PLANS DEVELOPED BY:
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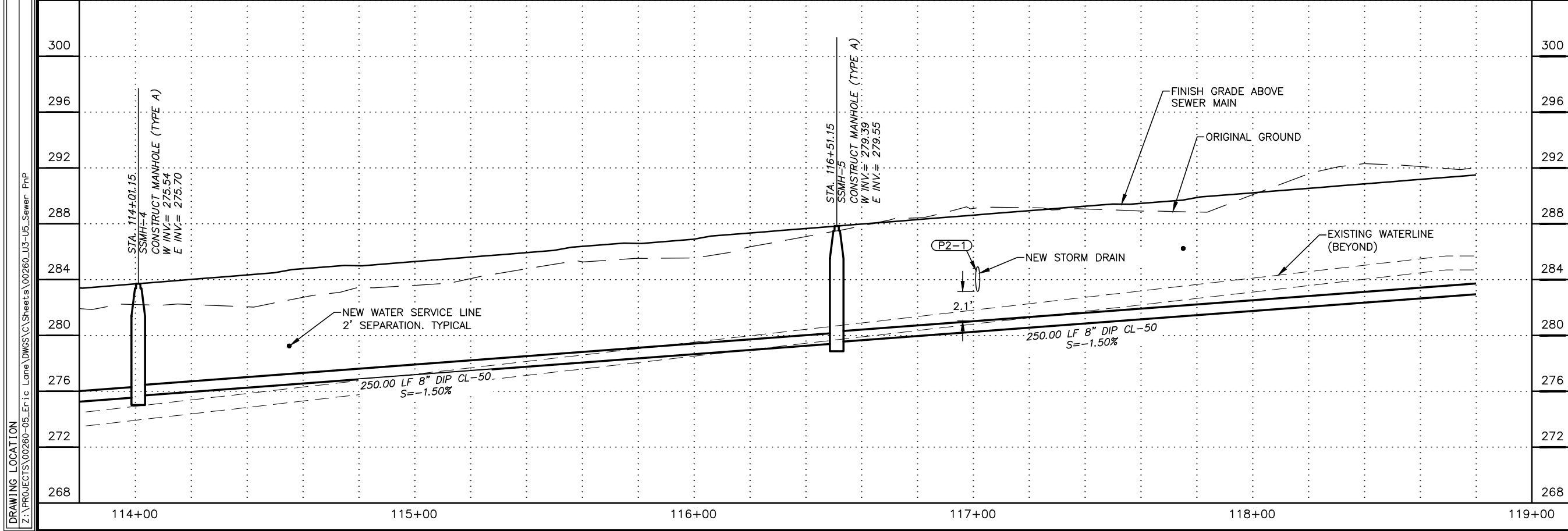
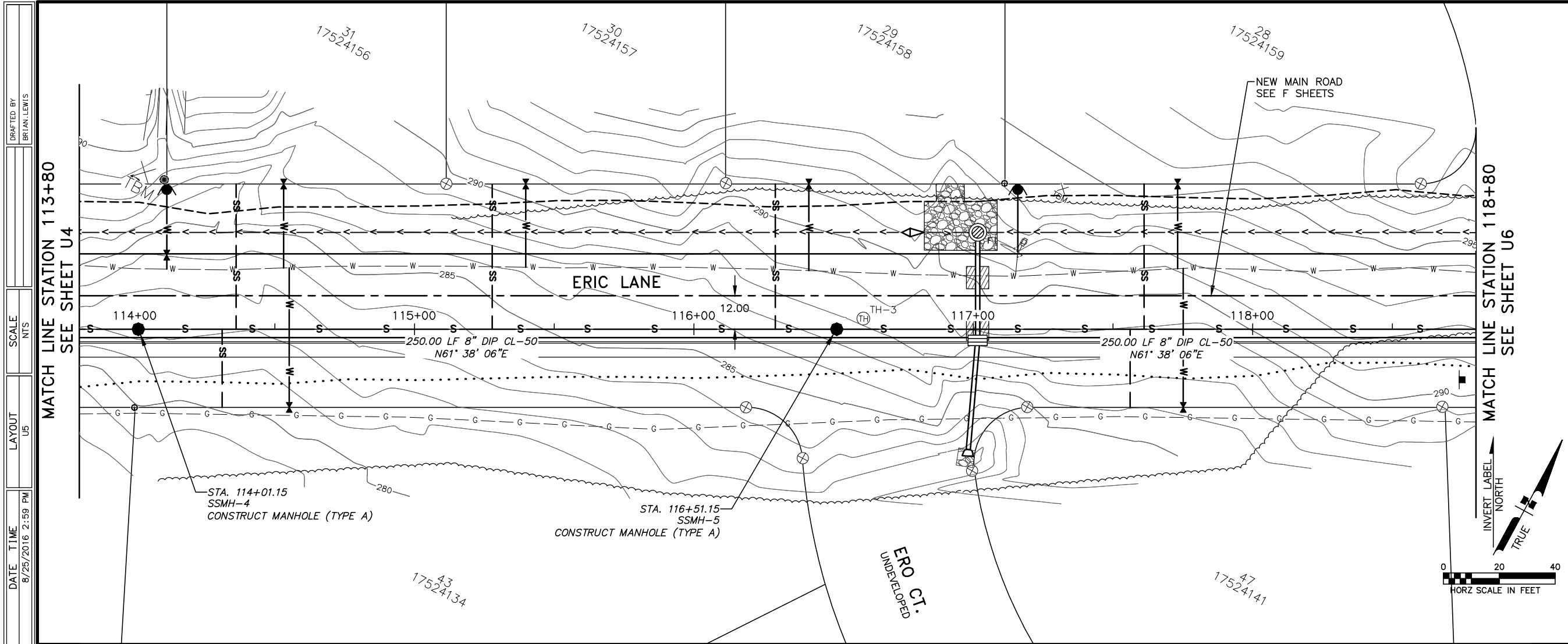
FOR
CITY OF HOMER, ALASKA
PUBLIC WORKS DEPARTMENT

CITY OF HOMER
ALASKA
MARCH 31, 1981

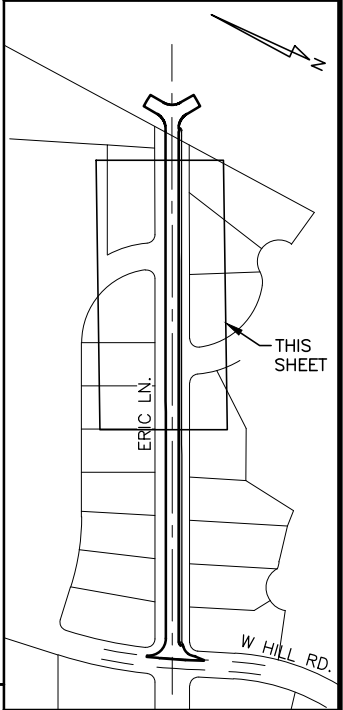
PHONE: (907) 235-3170
FAX: (907) 235-3145

STATE OF ALASKA
40th
John B. Pekar
CE 10591
Aug 25, 2016
REGISTERED PROFESSIONAL ENGINEER

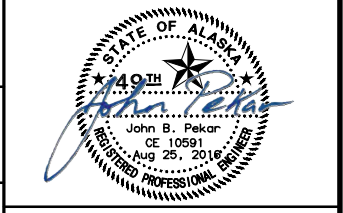
CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
SEWER PLAN AND
PROFILE



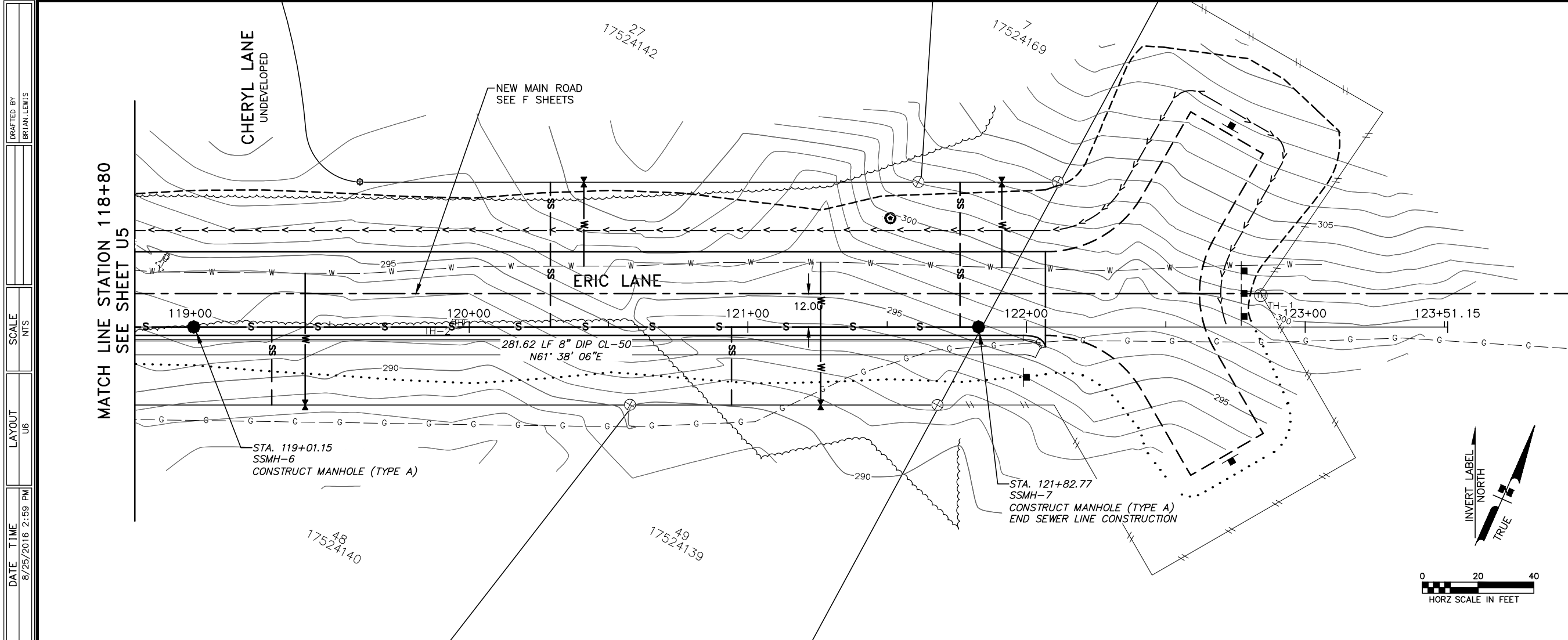
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ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION



PLANS DEVELOPED BY:
KINNEY ENGINEERING, LLC
3909 Arctic Blvd, Suite 400
Anchorage, Alaska 99503
(907) 346-2373
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CITY OF HOMER
ERIC LANE
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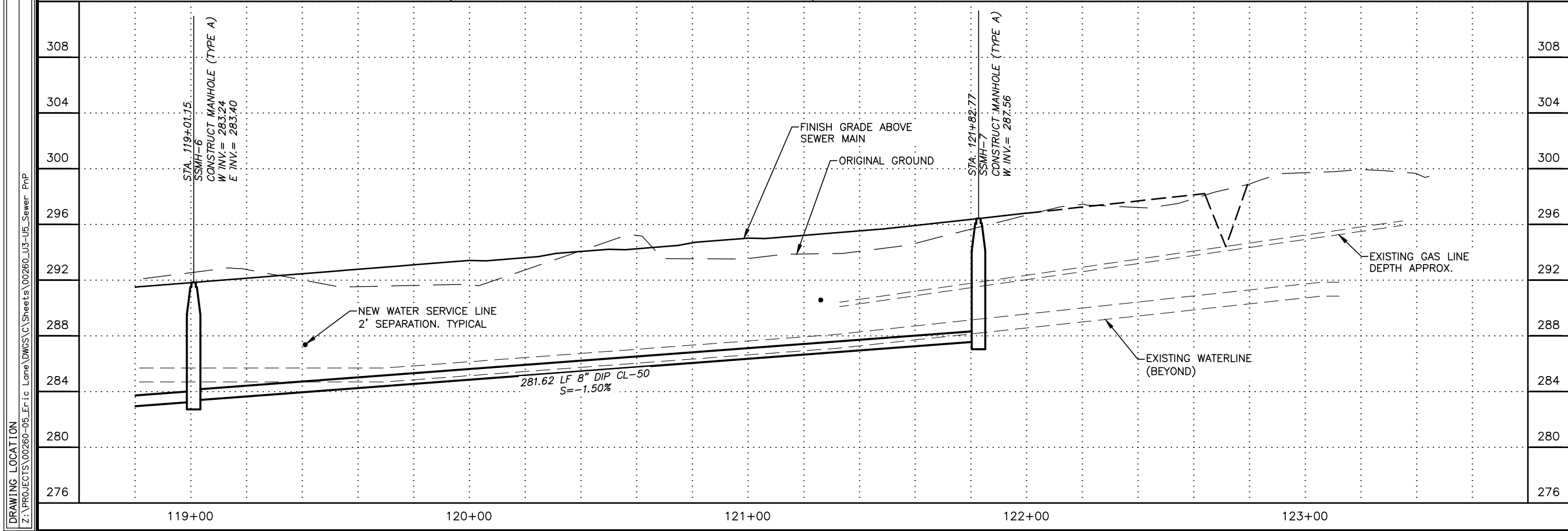


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REVISIONS			
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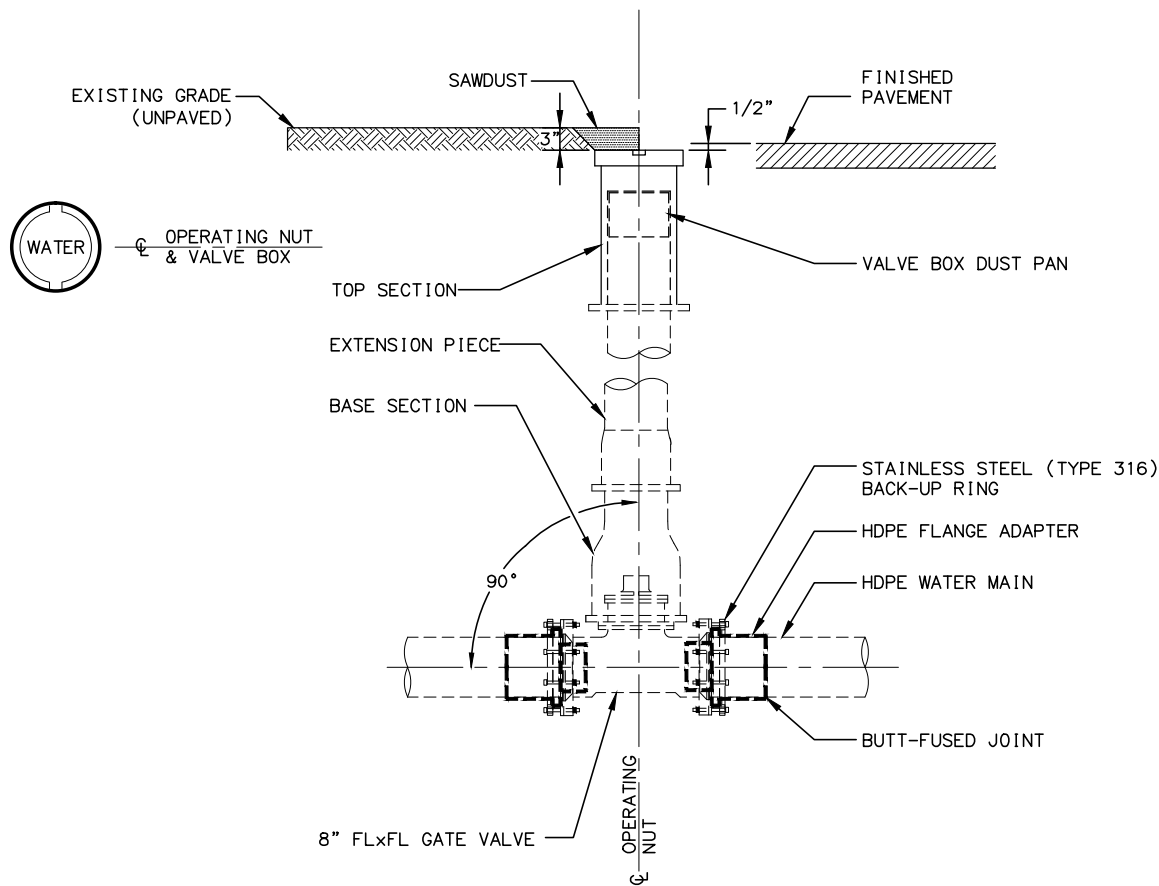
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BRENDA BAKER

SCALE
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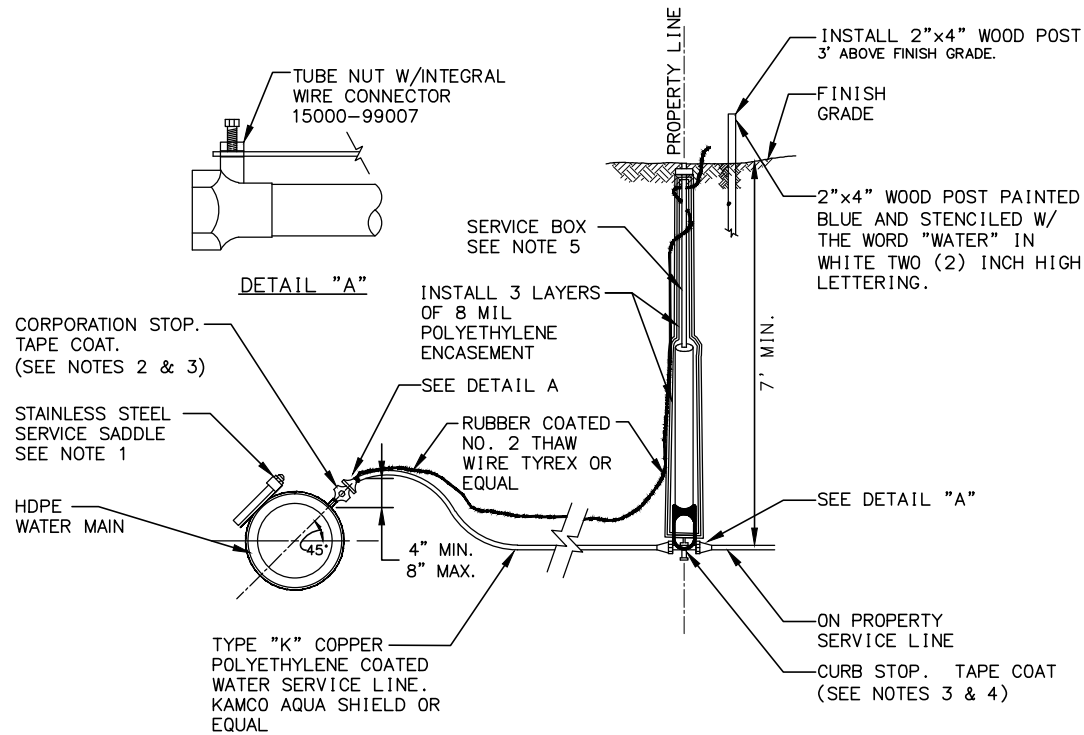
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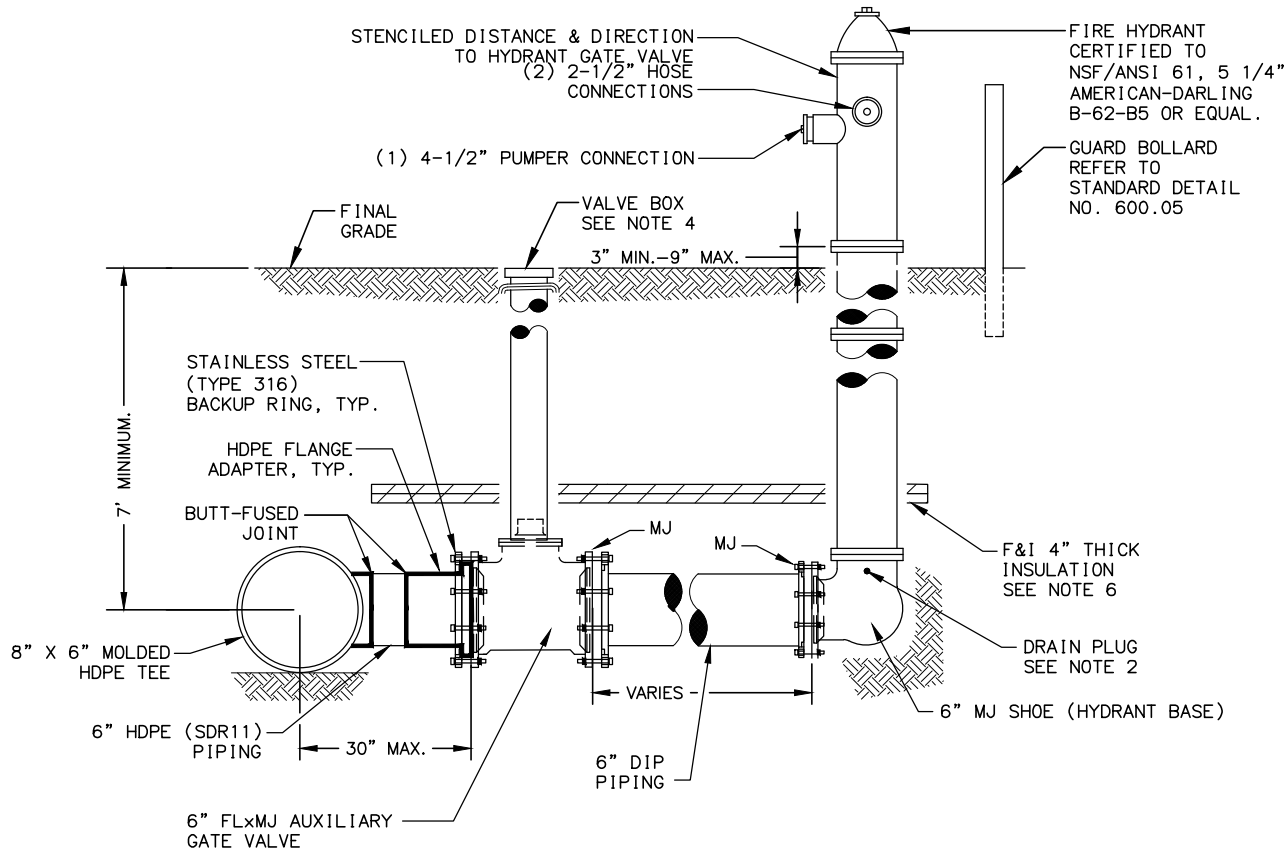
VALVE INSTALLATION NOTES:

1. LID AND TOP SECTION SHALL BE MUELLER MVB DUCTILE IRON ADJUSTABLE TOP OR APPROVED EQUAL.
2. EXTENSION PIECE AND BASE SECTION SHALL BE MUELLER MVB COMPOSITE OR APPROVED EQUAL.
3. VALVE BOX DUST PAN SHALL BE THE PRODUCT OF THE VALVE BOX MANUFACTURER.
4. FURNISH AND INSTALL RUBBER GASKET/NSF 61 BETWEEN ALL FLANGES.

TYPICAL VALVE & VALVE BOX ASSEMBLY DETAIL



WATER SERVICE CONNECTION DETAIL



HYDRANT INSTALLATION NOTES:

1. HYDRANT BARREL SHALL BE INSTALLED PLUMB AND THE LEG SHALL BE INSTALLED LEVEL.
2. DRAIN PLUG SHALL BE INSTALLED BY CONTRACTOR.
3. ALL HYDRANTS SHALL BE PAINTED CATERPILLAR YELLOW.
4. AUXILIARY GATE VALVE & VALVE BOX SHALL BE INSTALLED TO ELEVATION ACCORDING TO DETAIL FOR TYPICAL VALVE & VALVE BOX ASSEMBLY. USE MUELLER MVB COMPOSITE VALVE BOX WITH MUELLER MVB DUCTILE IRON ADJUSTABLE TOP OR APPROVED EQUAL.
5. FURNISH AND INSTALL RUBBER GASKET/NSF 61 BETWEEN ALL FLANGES.
6. 4" (R-20 EQUIVALENT) EXTRUDED POLYSTYRENE, 60 PSI, RIGID BOARD INSULATION. 4' WIDE CENTERED OVER THE PIPE WITH STAGGERED INSULATION SEAMS. INSTALL ENTIRE LENGTH FROM THE MAIN TO THE HYDRANT SHOE, INCLUDING AROUND THE VALVE BOX BASE AND EXTENSION.

SINGLE PUMPER 'L' BASE HYDRANT ASSEMBLY DETAIL

NOTE TEE AND VALVE BOX ARE EXISTING AT STA. 17+15.96 HYDRANT.

WATER SERVICE INSTALLATION NOTES:

1. STAINLESS STEEL SERVICE SADDLE SHALL BE ROMAC 306-H OR APPROVED EQUAL. INSTALL STAINLESS STEEL (TYPE 316) NUTS, BOLTS AND WASHERS AND TORQUE PER MANUFACTURER'S RECOMMENDATIONS.
2. CORPORATION STOP SHALL BE MUELLER H-15025 OR APPROVED EQUAL.
3. TAPE COAT NEW SERVICE VALVES AND FITTINGS WITH DENSYL TAPE OR APPROVED EQUAL IN ACCORDANCE WITH SPECIFICATIONS. PRIME SURFACES WITH DENSO PASTE OR APPROVED EQUAL.
4. CURB STOP SHALL BE MUELLER H-15214 OR APPROVED EQUAL.
5. SERVICE BOX SHALL BE MUELLER H-10306 OR APPROVED EQUAL. ROD SHALL BE ATTACHED TO CURB STOP WITH 4" BRASS COTTER PIN OR #6 AWG SOLID COPPER WIRE
6. ALL STAINLESS STEEL BOLT THREADS SHALL BE COATED WITH TS MOLY-LUBRICANTS TS-74 STAINLESS ANTISEIZE, OR APPROVED EQUAL, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SHEET NO.		TOTAL SHEETS	
U7		29	
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

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CITY OF HOMER
ERIC LANE
ROAD AND SEWER
IMPROVEMENTS
HYDRANT DETAILS &
WATER SERVICE
CONNECTION DETAIL

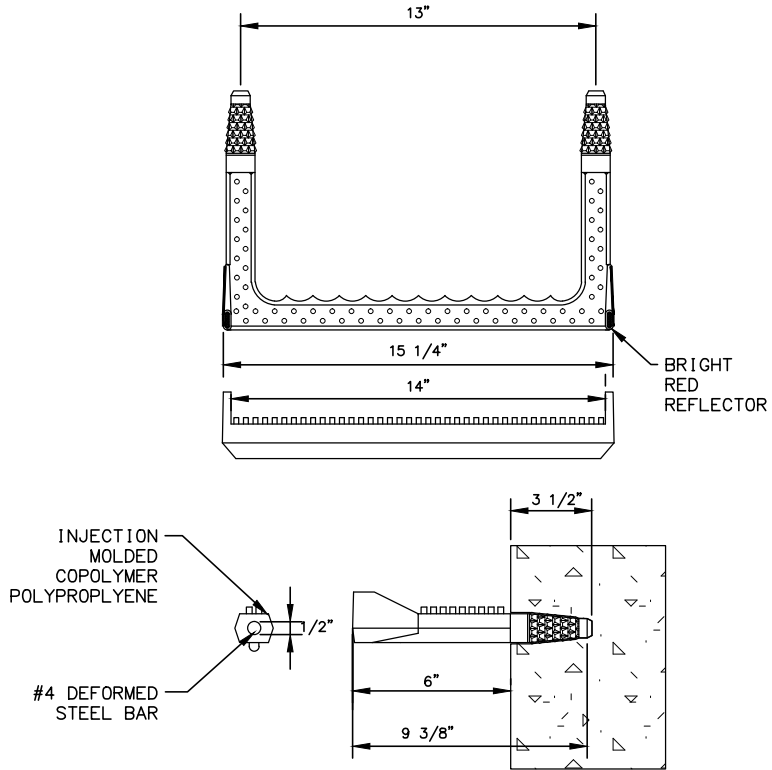
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BRENDA BAKER

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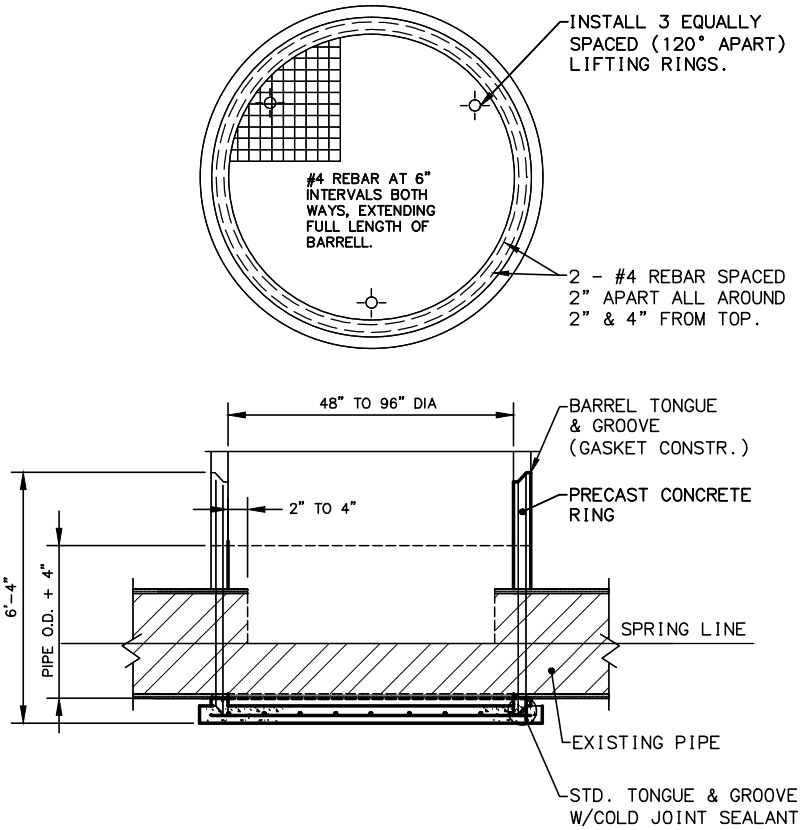
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- NOTES:
1. DRIVE RUNG INTO PREFORMED OR DRILLED HOLES WITH A 6 TO 10 LB. SLEDGE HAMMER, AFTER CONCRETE IS CURED TO 3000 PSI MIN.
 2. THE INSTALLED STEP SHALL RESIST A PULLOUT FORCE OF 1500 LBS.

COPOLYMER POLYPROPYLENE MANHOLE STEP



- NOTES:
1. NO REBAR TO EXTEND INTO PIPE OPENING.
 2. MORTAR PENETRATIONS
 3. REFER TO DETAIL 500.01, 500.02, 500.03, 500.07, 500.08, & 500.09 FOR PROPER DIMENSIONS, SEALING, LADDER AND OTHER COMPONENTS.

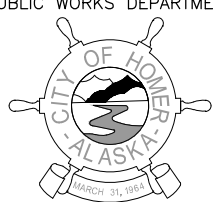
HORSE SHOE SANITARY SEWER MANHOLE DETAIL

SSMH-1

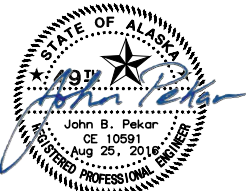
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CITY OF HOMER
ERIC LANE
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IMPROVEMENTS

MANHOLE DETAILS