



WILLOCK HILL ENTRY ROAD  
DRAINAGE AND STREET REPAIRS  
(ENG WIL 2015-01)

MAYOR  
SEAN TERRY

MAYOR PRO TEM  
CHAD ANDERSON

CITY COUNCIL

ERIK GEIGER  
WAYNE NABORS  
ANDY HOPKINS

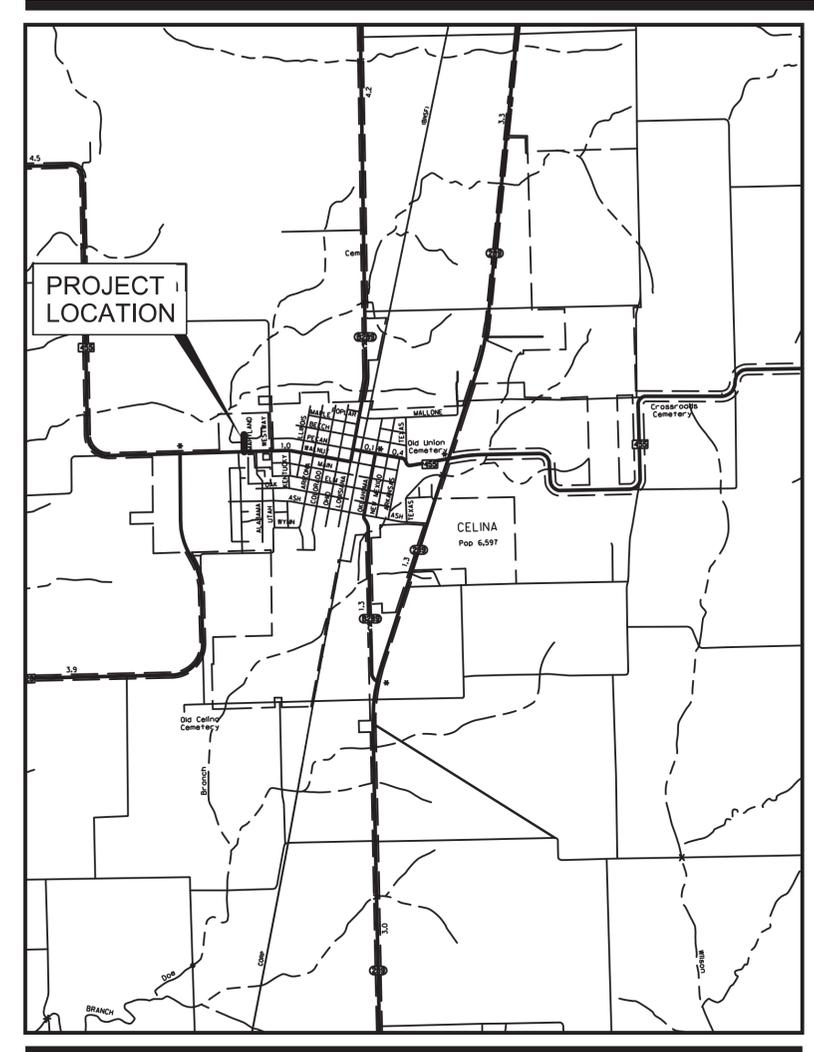
CHAD ANDERSON  
LORI VADEN  
CARMEN ROBERTS

CITY MANAGER  
MIKE FOREMAN

DIR. OF ENGINEERING & PUBLIC WORKS  
GABE JOHNSON, P.E., P.H., CFM

RECORD DRAWINGS - AUGUST 2016  
These Record Drawings were prepared by or under the supervision of Brian C. Haynes, P.E. 90985. These Record Drawings have been prepared based on information provided by the City of Celina, Texas. The Design Professional has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.  
Design Consultant: Half Associates Inc. TBPE # F-312

Location Map



LOCATOR MAP  
PROJECT LENGTH 0.5 MILES  
N.T.S.

REFER TO INDEX OF SHEETS, NEXT PAGE.



**GENERAL**

- All construction shall be in accordance with the latest revision of the North Central Texas Council of Governments "Standard Specifications for Public Works Construction" including the Standard Drawings therein and the City of Celina's addendum thereto. Contractor shall have at least one set of approved Engineering Plans and Specifications on-site at all times.
- Before beginning construction, the contractor shall prepare a construction sequence schedule. The construction schedule shall be such that there is minimum interference with traffic along or adjacent to the project.
- Construction may not begin earlier than 7:00 A.M. on weekdays nor continue after dark without permission from the City of Celina. Construction on holidays and Saturday must be approved two days in advance. A fee of \$300.00 a day for working on holidays and Saturday will be accessed payable to the city before work is performed. Work may not begin before 8:00 A.M. on holidays and Saturday and work on Sunday is prohibited without special permission and payment of fees.

DIG TESS	800-DIG-TESS
GCEC-TELECOM	903-482-7274
GCEC-ELECTRIC	903-821-3007
AT&T	972-569-3013
ATMOS ENERGY	972-881-4161
ATMOS ENERGY	214-341-9900
CROSSTEX ENERGY	817-570-6753
ONEOK	903-257-6594
COSERV-ELEC	940-321-7800
COSERV-GAS	940-321-7800
CITY OF CELINA	972-382-2682
TOWN OF PROSPER	972-347-9969
MARILEE SUD	972-382-3222
GRANDE	972-410-0583
SUDDEN LINK	469-853-0486

- Work may not be backfilled or covered until the City has inspected it.
- Material testing shall be performed by an independent testing laboratory and paid for by the Contractor. The following material tests shall be provided by the Contractor:
  - Embankment - One soil density test shall be performed at each location for each 500 C.Y. of backfill placed.
  - Pavement Sub grade - One gradation test (where lime stabilized) and one soil density test shall be performed for each 300 linear feet of pavement unless otherwise noted. Gradations must pass 100% through a 1 1/4" sieve and 60% through a #4 sieve.
  - Utility Trench Backfill - One soil density test shall be performed at 300 feet intervals or as directed by the Inspector.
  - Concrete Tests:
    - Compressive Strength - Four test cylinders shall be taken from a representative portion of the concrete being placed for every 150-cubic yards of concrete pavement placed, but in no case shall less than 2 sets of cylinders be taken from any one day's placement.)
    - Air, slump, and temperature tests shall be taken for every set of cylinders made. Concrete with a temperature above 95° F will be rejected.
    - Additional cylinders and/or tests may be required at the Inspector's discretion.
  - The City shall select the location and depth of each soil density test unless otherwise directed.
- All excavation on the project is unclassified.
- Temporary erosion control shall be used to minimize the spread of silt and mud from the project on to existing streets, alleys, drainage ways and public and private property. Temporary erosion controls may include silt fences, rock check dams, stabilized construction entrances, straw bales, berms, dikes, swales, strips of undisturbed vegetation, check dams and other methods as required by the City Manager or his representative and shall conform to the Storm Water Quality Best Management Practices for Construction Activities as published by the North Central Texas Council of Governments and the City of Celina Erosion and Sediment Control Manual.
- Finished slopes on public rights-of-way and easements shall not be steeper than 4:1. All slopes steeper than 6:1 shall be covered with erosion control matting and are hydro mulched and maintained by the contractor until grass covers all parts of the slope.
- The contractor shall maintain one-way traffic at all times along the project. An approved suggested Traffic Control and Detour Plan are provided with the plans. Deviations or alterations made to this plan by a Licensed Professional Engineer will require approval from the City.
- Remove, salvage and replace all street and traffic control signs, which may be damaged by the construction of the project. Signs to be reused can be stored at the City's Public Work Service Center at 107 E. Elm.
- All trenching and excavation shall be performed in accordance with OSHA standards. Trench safety design will be the responsibility of the Contractor. Contractor shall submit a trench safety design approved by a professional engineer to the City for review prior to the start of any underground utility construction.

**PAVING**

- All embankments shall be compacted to 95% Standard Proctor density.
- All streets and alleys shall be placed on lime stabilized sub grade with a lime content of not less than 7% or as approved by city engineer.
- The minimum 28 day compressive strength of concrete street paving shall not be less than 3600 psi and shall be air entrained. Water may not be applied to the surface of concrete paving to improve workability.
- All curb and gutter shall be integral with the pavement.
- Parabolic crowns are required on all street pavements except on major thoroughfares where straight sections are required.
- Streets and alleys shall be constructed with provisions for sidewalk ramps at all intersections.

**DRAINAGE**

- Storm sewer pipe shall be reinforced concrete, Class III unless otherwise noted.
- All structural concrete shall be Class "C" (3600 psi compressive strength at 28 days), air entrained.
- The contractor shall install plugs in storm sewer lines or otherwise prevent mud from entering the storm sewer system during construction.

**WATER AND SANITARY SEWER**

- Water mains shall be AWWA C-900 or 905 PVC Class 200 unless otherwise noted. Minimum cover for waterlines is 48" below top of curb, 60" where no curbed street is present or as required to clear existing utilities, whichever is greater. Class B+ embedment unless otherwise noted.
- All utility trench backfill shall be performed in 12" loose lifts and mechanically compacted with approved vibratory methods.
- Marking tape shall be installed one foot above and over PVC water lines.
- Fittings for PVC water lines shall be ductile iron and be encased in a polyethylene sheath.
- All Mechanical Joints will be restrained. (Mega-Lug etc.)
- Valves, including tapping valves shall be resilient seat gate valves, unless noted otherwise.
- All direct burial valves shall be provided with cast iron valve boxes with PVC stacks. Valve stacks shall be vertical and concentric with the valve stem. Stainless steel valve extensions are required on all valves where the operating nut is greater than 4 feet below finished grade.
- Fire hydrants shall be Waterous or equal as directed or approved by the City of Celina on a case by case basis and field painted silver with bonnet and caps color-coded to pipe size.
  - Six inch line- silver body with RED bonnet and caps.
  - Eight inch line- silver body with BLUE bonnet and caps.
  - Ten inch line- silver body with GREEN bonnet and caps.
  - Twelve inch and larger- silver body with YELLOW bonnet and caps.
- All exposed bolting on any buried equipment or material shall be stainless steel. Included are:
  - Bonnet and stuffing box bolts on valves.
  - Shoe bolts on fire hydrants.
  - Flange bolts.
  - "Cor-ten" mechanical joint "T" bolts are acceptable for direct burial service.
- Depending on meter size; meter boxes shall be DFW37C-12-1SAF, DFW38C-14-1SAF, DFW65C-14-1SAF, or approved equal, and shall incorporate the Celina logo in the lid.
- One sample station shall be provided to the city for every 250 connections.
- Sanitary sewer mains shall be DR 35 PVC. Embedment shall be Class H unless otherwise noted.
- The contractor shall install and maintain watertight plugs in all connections to the City's sanitary sewer system until the City accepts the project.
- All sanitary sewer lines and manholes shall be leak tested before the project is accepted.
- Deflection testing of PVC sewer lines is required. Deflection shall be tested with a mandrel for 5% deflection.
- All sewer lines shall be video inspected with a copy of the video and station report submitted to the City.
- Mandrel, Air Test, and Video inspection shall not be performed until all utilities are complete, in place, and backfilled.
- Specifications are not meant to exclude any other manufacturer. Any specification may be replaced with an approved equal upon approval by the City of Celina.

SHEET NO.	SHEET NAME
1	COVER SHEET
2	GENERAL NOTES AND SHEET INDEX
3	DEMOLITION PLAN
4	BASELINE LAYOUT AND SURVEY CONTROL
5	TYPICAL SECTIONS
6	PAVING PLAN AND PROFILE
7	PAVING DETAILS
8	GRADING PLAN
9	DRAINAGE AREA MAP
10	STORM DRAIN PLAN
11	TXDOT SAFETY END TREATMENT DETAIL
12	EROSION CONTROL PLAN
13	CELINA STANDARD DETAIL SHEET
14	CELINA STANDARD DETAIL SHEET
15	CELINA STANDARD DETAIL SHEET
16	CELINA STANDARD DETAIL SHEET
17	CELINA STANDARD DETAIL SHEET

WILLOCK HILL  
ENTRY ROAD  
DRAINAGE AND  
STREET REPAIRS  
Celina, Texas

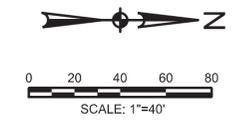


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Project No.:	31013
Issued:	8/19/2016
Drawn By:	GAH
Checked By:	JFR
Scale:	AS NOTED
Sheet Title	Sheet Title
GENERAL NOTES AND SHEET INDEX	





**LEGEND**

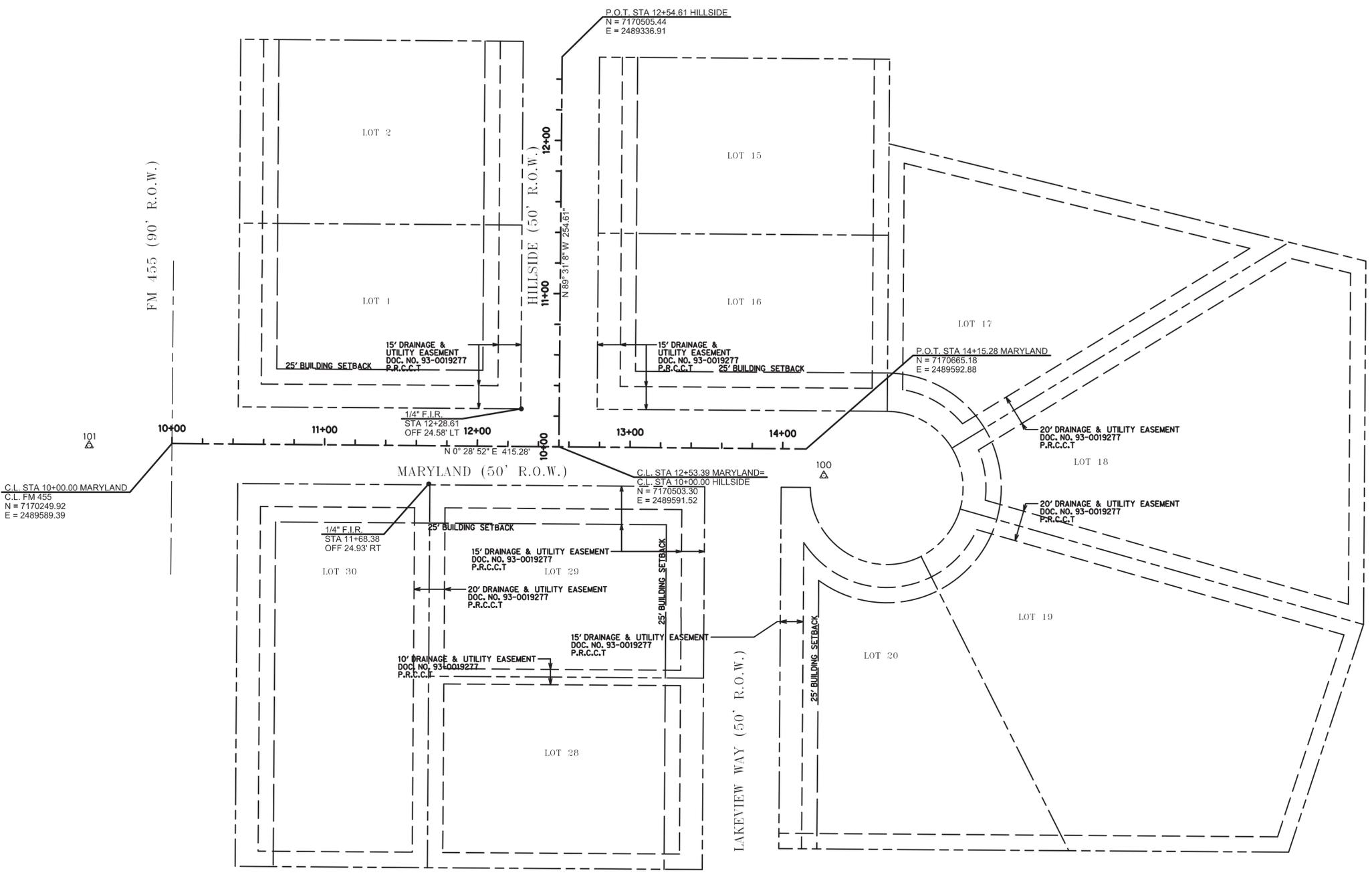
- EXISTING RIGHT OF WAY/ PROPERTY LINE
- - - EXISTING EASEMENT
- EXISTING BUILDING SETBACK
- △ CONTROL POINT
- FOUND MONUMENT
- CENTERLINE POINT
- P.R.C.C.T. PLAT RECORDS COLLIN COUNTY, TEXAS

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Project No.:	31013
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Drawn By:	GAH
Checked By:	JFR
Scale:	AS NOTED
Sheet Title	Sheet Title
BASELINE LAYOUT AND SURVEY CONTROL	

Design Consultant:	Half Associates Inc. TBPE
Sheet No.	4

Project No.:	31013
Issued:	8/19/2016
Drawn By:	GAH
Checked By:	JFR
Scale:	AS NOTED
Sheet Title	Sheet Title
BASELINE LAYOUT AND SURVEY CONTROL	
Sheet No.	4

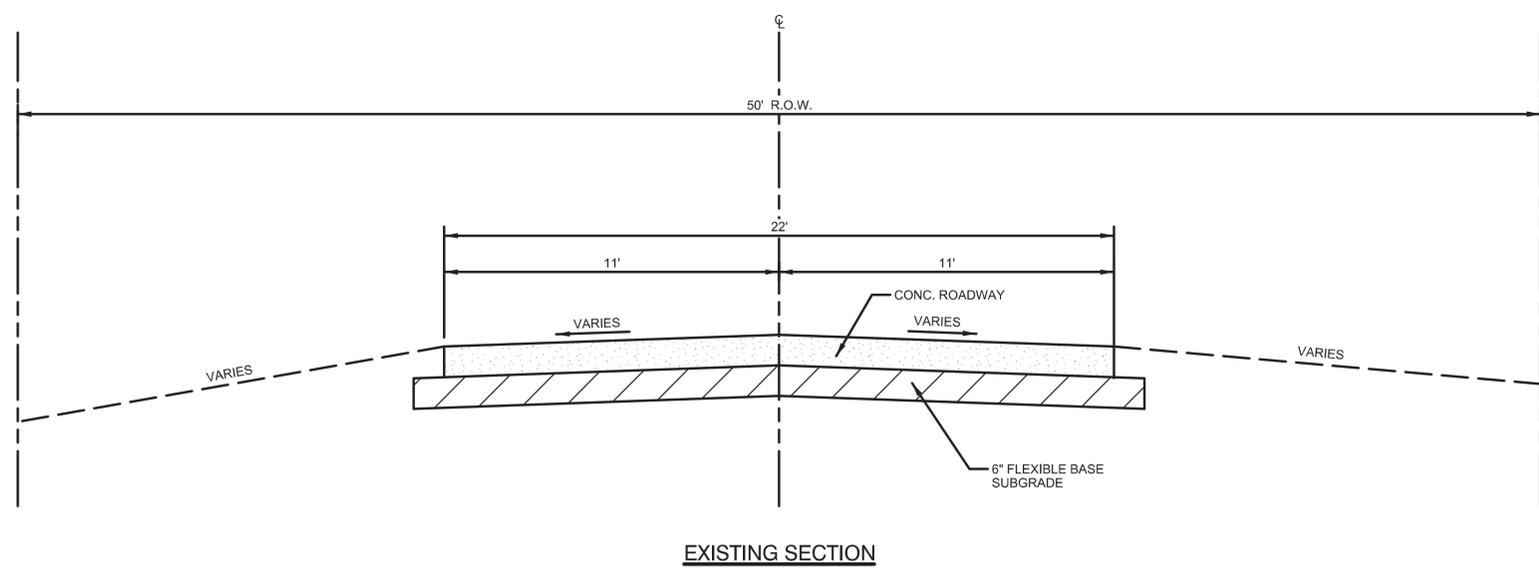


**CONTROL POINTS**

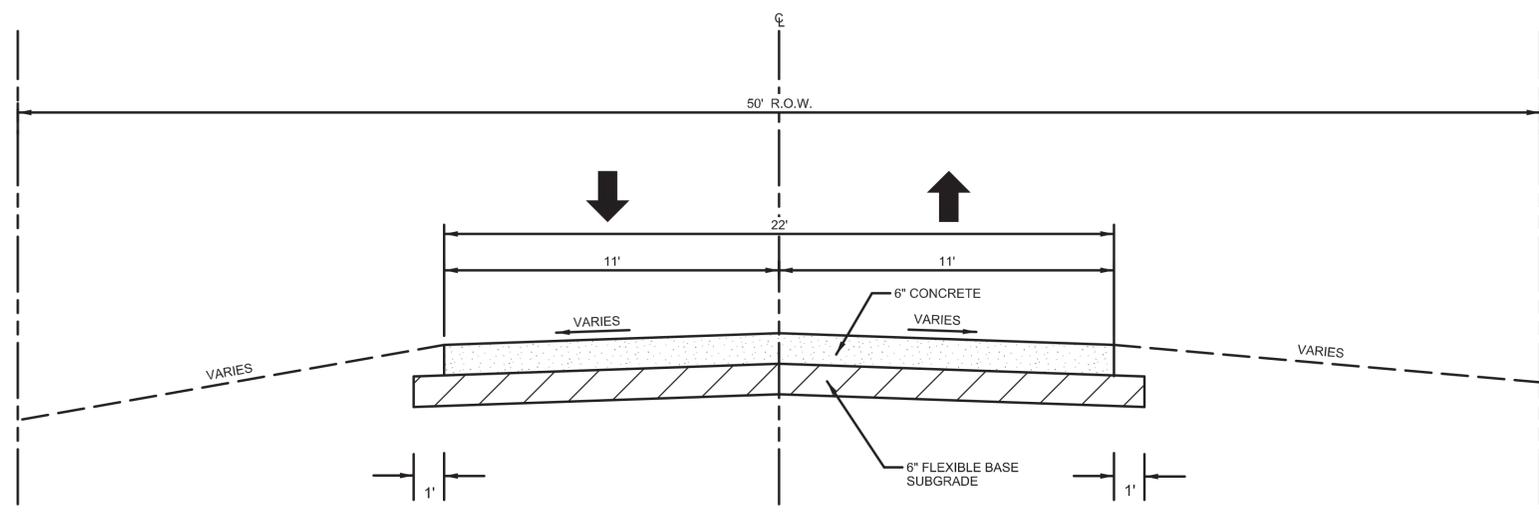
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100	7170676.83	2489610.34	655.37	PK Nail w/Shiner TP
101	7170195.72	2489590.72	670.15	1/2" SIR w/RED TP CAP

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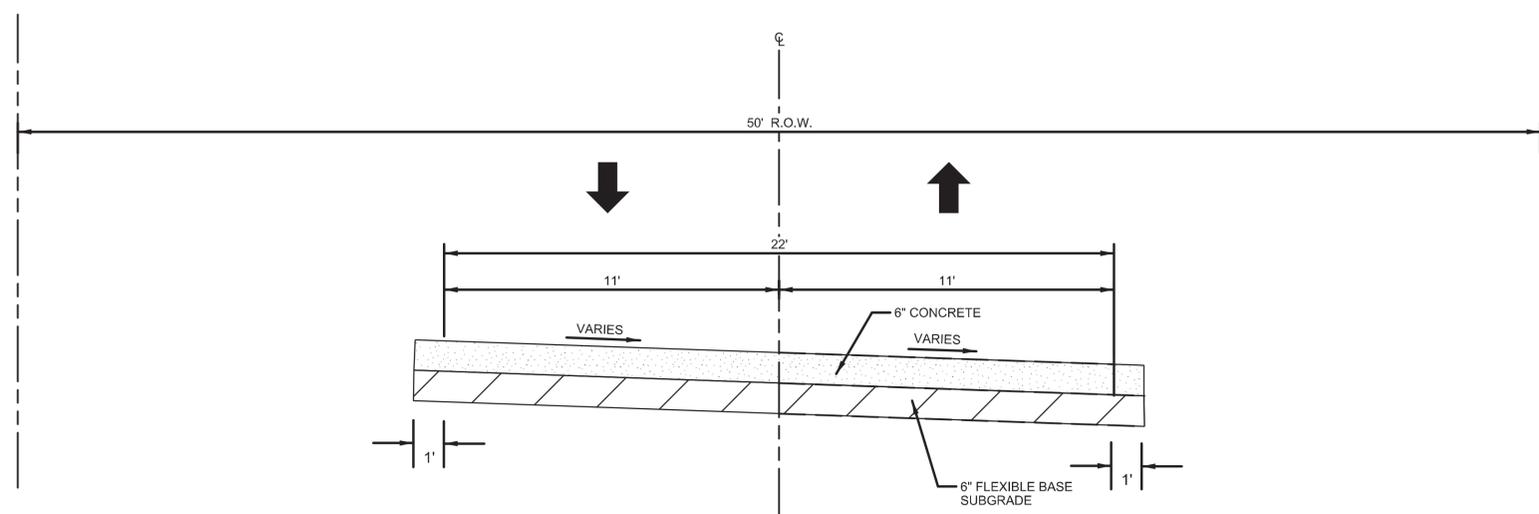
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**EXISTING SECTION**



**PROPOSED SECTION  
STA. 10+43.26 TO STA 11+95.03**



**PROPOSED SECTION  
STA. 11+95.03 TO END**

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**WILLOCK HILL  
ENTRY ROAD  
DRAINAGE AND  
STREET REPAIRS**  
 Celina, Texas



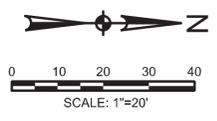
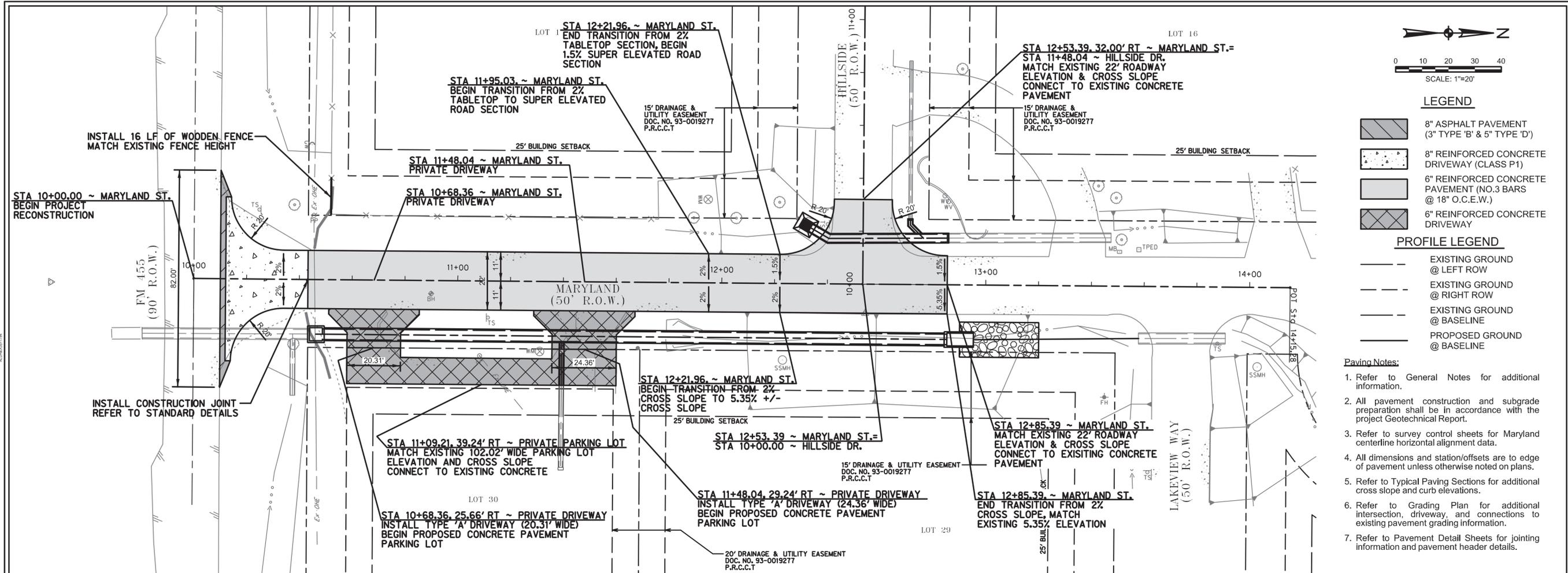
**HALFF**  
 6605 NORTH WALNUT AVE, SUITE 500  
 GRAND PRAIRIE, TEXAS 75050-1487  
 TEL (214) 201-1270  
 FAX (214) 201-1271

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TYPICAL SECTIONS

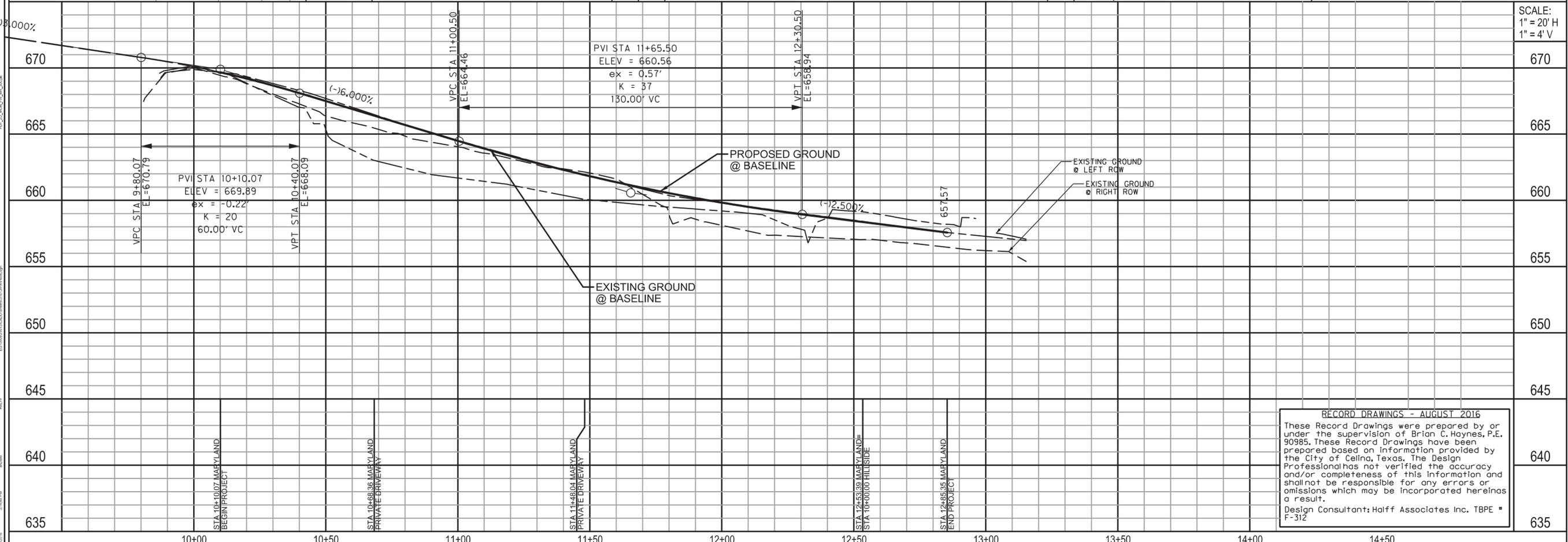
**5**  
 Sheet Number



- LEGEND**
- 8" ASPHALT PAVEMENT (3" TYPE 'B' & 5" TYPE 'D')
  - 8" REINFORCED CONCRETE DRIVEWAY (CLASS P1)
  - 6" REINFORCED CONCRETE PAVEMENT (NO.3 BARS @ 18" O.C.E.W.)
  - 6" REINFORCED CONCRETE DRIVEWAY

- PROFILE LEGEND**
- EXISTING GROUND @ LEFT ROW
  - EXISTING GROUND @ RIGHT ROW
  - EXISTING GROUND @ BASELINE
  - PROPOSED GROUND @ BASELINE

- Paving Notes:**
- Refer to General Notes for additional information.
  - All pavement construction and subgrade preparation shall be in accordance with the project Geotechnical Report.
  - Refer to survey control sheets for Maryland centerline horizontal alignment data.
  - All dimensions and station/offsets are to edge of pavement unless otherwise noted on plans.
  - Refer to Typical Paving Sections for additional cross slope and curb elevations.
  - Refer to Grading Plan for additional intersection, driveway, and connections to existing pavement grading information.
  - Refer to Pavement Detail Sheets for jointing information and pavement header details.



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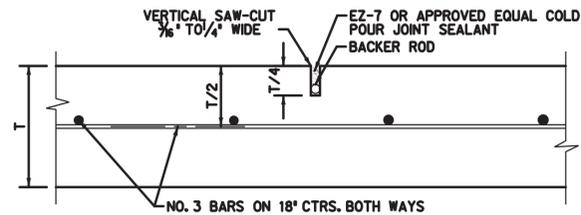
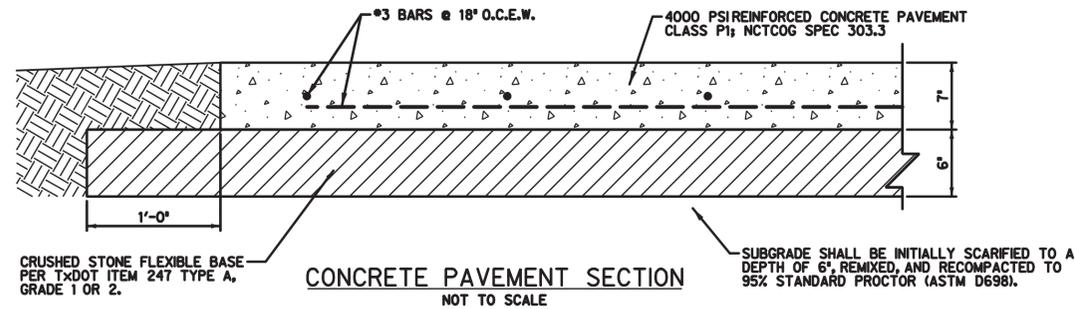
**WILLOCK HILL ENTRY ROAD DRAINAGE AND STREET REPAIRS**  
Celina, Texas

**HALFF**

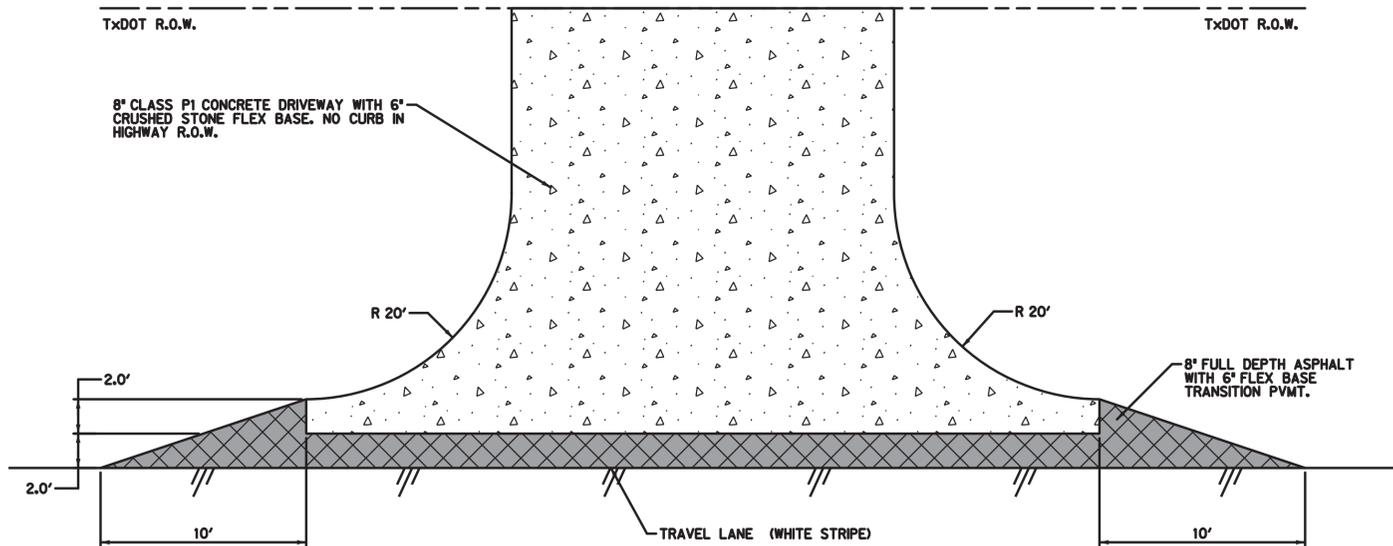
2606 NORTH WALNUT SUITE 500  
GRAND PRAIRIE, TEXAS 75050-1487  
TEL (214) 201-1270  
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PAVING PLAN AND PROFILE	
Sheet Number	6



NOTE: SAWCUT EVERY X'-X"  
SEE GEOTECH REPORT



**NOTE:**  
All pavement construction and subgrade preparation shall be in accordance with the Geotechnical Engineering Study - Willock Hills Addition - Phase 1, Maryland Street, Celina, Texas prepared by CMJ Engineering, Inc. (project No. 117-15-194) dated July 2015.

WILLOCK HILL  
ENTRY ROAD  
DRAINAGE AND  
STREET REPAIRS  
Celina, Texas



**HALFF**  
6605 NORTH STATE ST., SUITE 500  
GRAND PRAIRIE, TEXAS 75050-1497  
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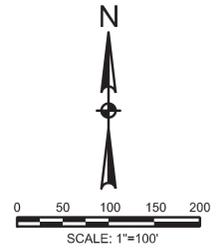
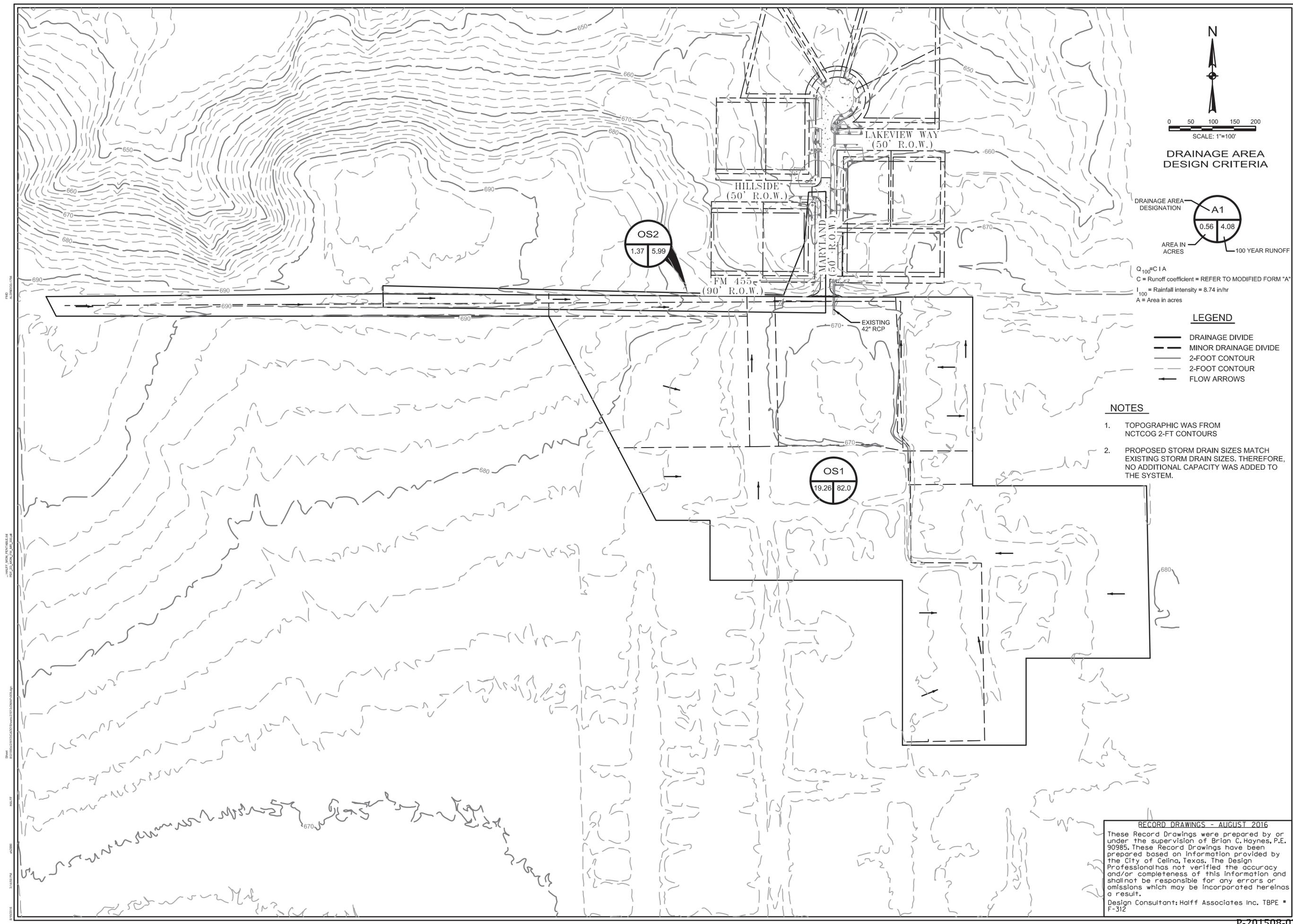
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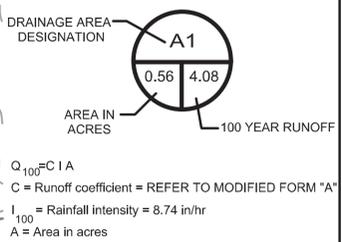
PAVING DETAILS

7  
Sheet Number





**DRAINAGE AREA DESIGN CRITERIA**



**LEGEND**

- DRAINAGE DIVIDE
- - - MINOR DRAINAGE DIVIDE
- 2-FOOT CONTOUR
- 2-FOOT CONTOUR
- FLOW ARROWS

**NOTES**

1. TOPOGRAPHIC WAS FROM NCTCOG 2-FT CONTOURS
2. PROPOSED STORM DRAIN SIZES MATCH EXISTING STORM DRAIN SIZES. THEREFORE, NO ADDITIONAL CAPACITY WAS ADDED TO THE SYSTEM.

**WILLOCK HILL  
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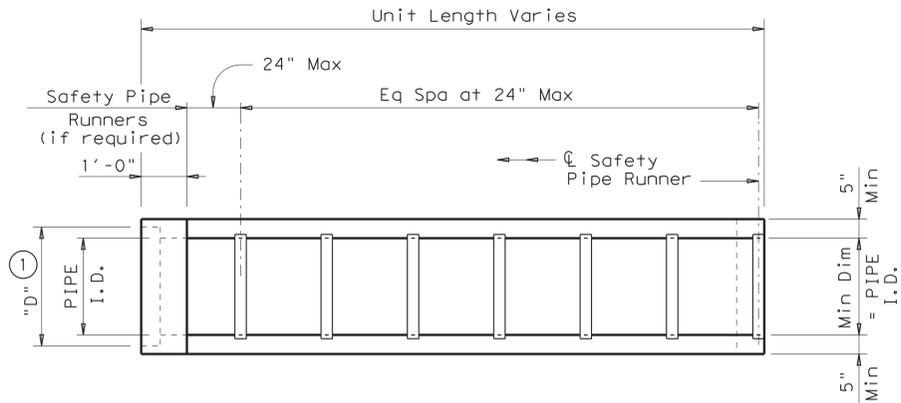
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<b>DRAINAGE AREA MAP</b>	
<b>9</b>	
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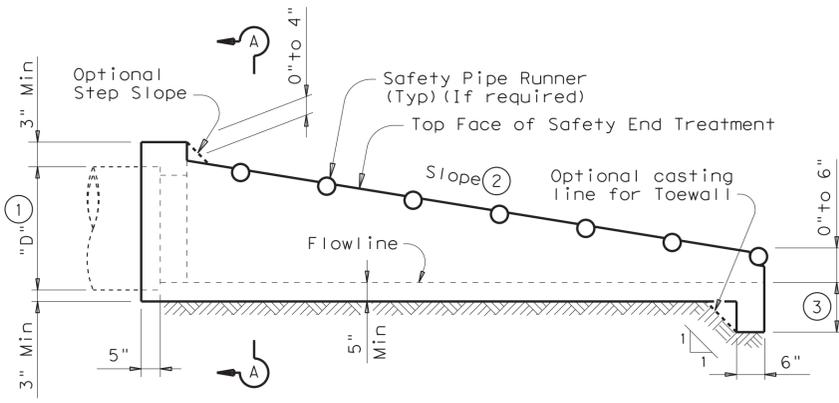


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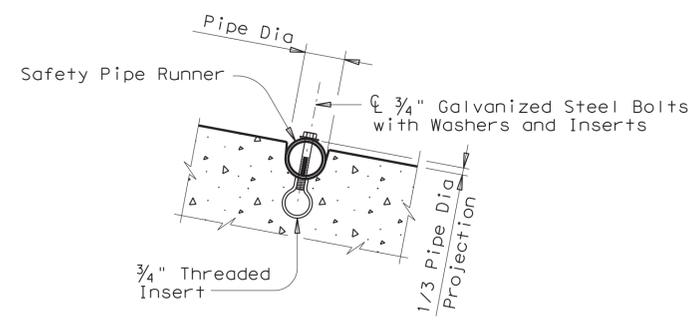
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**PLAN**

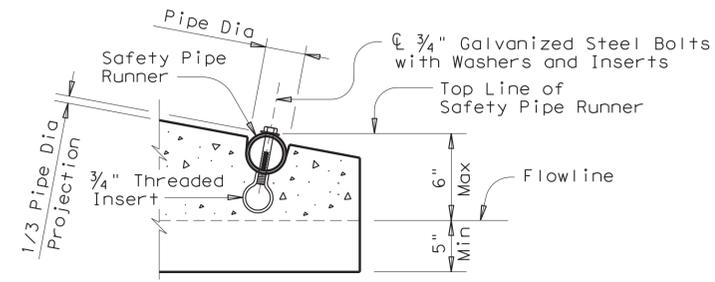


**LONGITUDINAL ELEVATION**

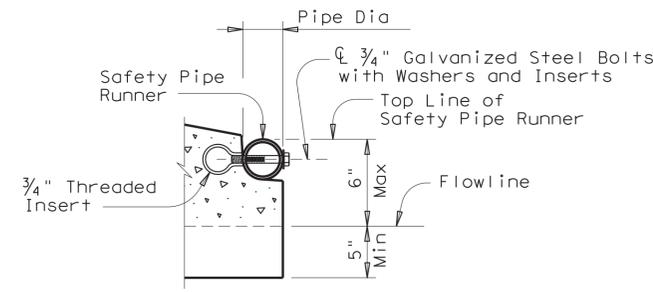


**INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS**

(If required)



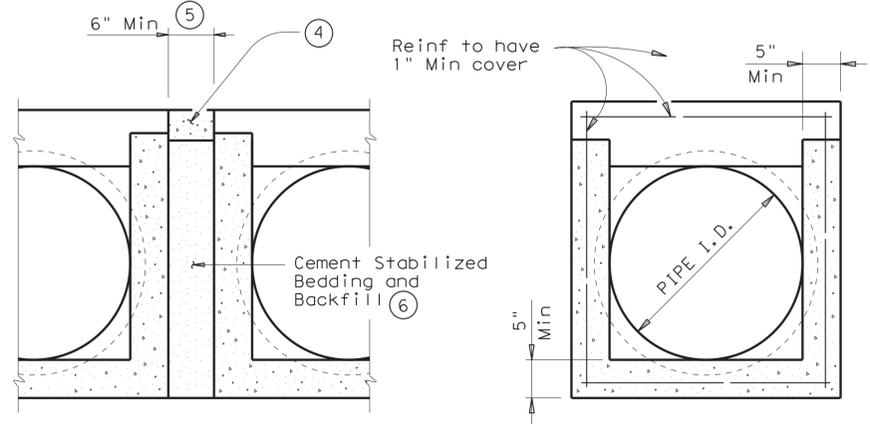
**OPTION A**



**OPTION B**

**END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS**

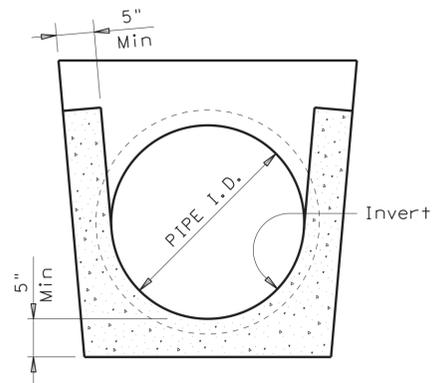
(If required)



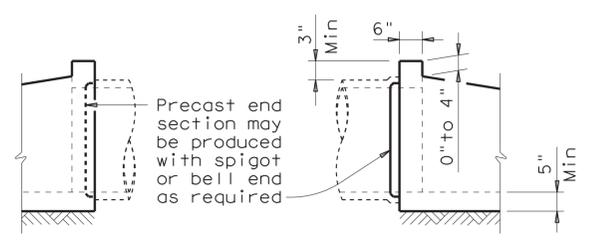
**MULTIPLE PIPE INSTALLATION**

**OPTION WITH SQUARE BOTTOM**

**SECTION A-A**



**OPTION WITH INVERT BOTTOM**



**OPTIONAL JOINT**

(Showing joint between RCP and Precast Safety End Treatment)

PIPE I.D.	PIPE WALL "B" THICKNESS	"D"	MAXIMUM SLOPE	MINIMUM LENGTH OF UNIT	PIPE RUNNERS REQUIRED		REQUIRED PIPE RUNNER SIZES		
					SINGLE PIPE	MULTIPLE PIPE	NOMINAL DIA.	O.D.	I.D.
12"	2"	17"	6:1	4'-9"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
15"	2 1/4"	20 1/2"	6:1	6'-5"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
18"	2 1/2"	24"	6:1	8'-0"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
24"	3"	31"	6:1	11'-3"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
30"	3 1/2"	38 1/2"	6:1	14'-8"	No	Yes	4" STD	4.500"	4.026"
36"	4"	45 1/2"	6:1	17'-11"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 1/2"	52 1/2"	6:1	21'-2"	Yes	Yes	4" STD	4.500"	4.026"

- ① Dimension "D" is based on ASTM C-76, Class III, Wall "B" thickness. If any other wall thickness is used, dimension "D" must be adjusted accordingly.
- ② Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.
- ③ Toewall to be used only when dimension is shown elsewhere in the plans.
- ④ The top 4" of void between Precast End Treatments shall be filled with concrete Riprap and shall be considered subsidiary to Safety End Treatment.
- ⑤ Clear distance between pipes shall be adjusted to provide for the minimum distance between safety end treatments.
- ⑥ Cement stabilized bedding and backfill shall be in accordance with the Item, "Excavation and Backfill for Structures". Bedding and backfill shall be considered subsidiary to the Item "Safety End Treatment". When concrete riprap is specified around the safety end treatment, backfill shall be as directed by Engineer.

**GENERAL NOTES:**

Precast safety end treatment for reinforced concrete pipe may be used for TYPE II end treatment as specified in Item "Safety End Treatment". When Precast Safety End Treatment is used as a Contractor's alternate to mitered RCP, Riprap will not be required unless noted otherwise on the plans.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Manufacture of this product shall conform to requirements of Item "Safety End Treatment" except as noted below:

- A. Minimum reinforcing shall be #4 at 6" (Grade 40) or #4 at 9" (Grade 60) each way or 6 x 6 - W12 x W12 or 5 x 5 - W10 x W10 welded wire reinforcement (WWR).
- B. Concrete for precast (steel formed) sections shall be Class "C" with a minimum compressive strength of 3600 psi.

At the option and expense of the Contractor the next larger size of Safety End Treatment may be furnished; as long as the "D" dimension cast is that of the required size of pipe.

Pipe Runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

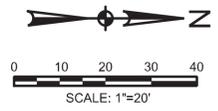
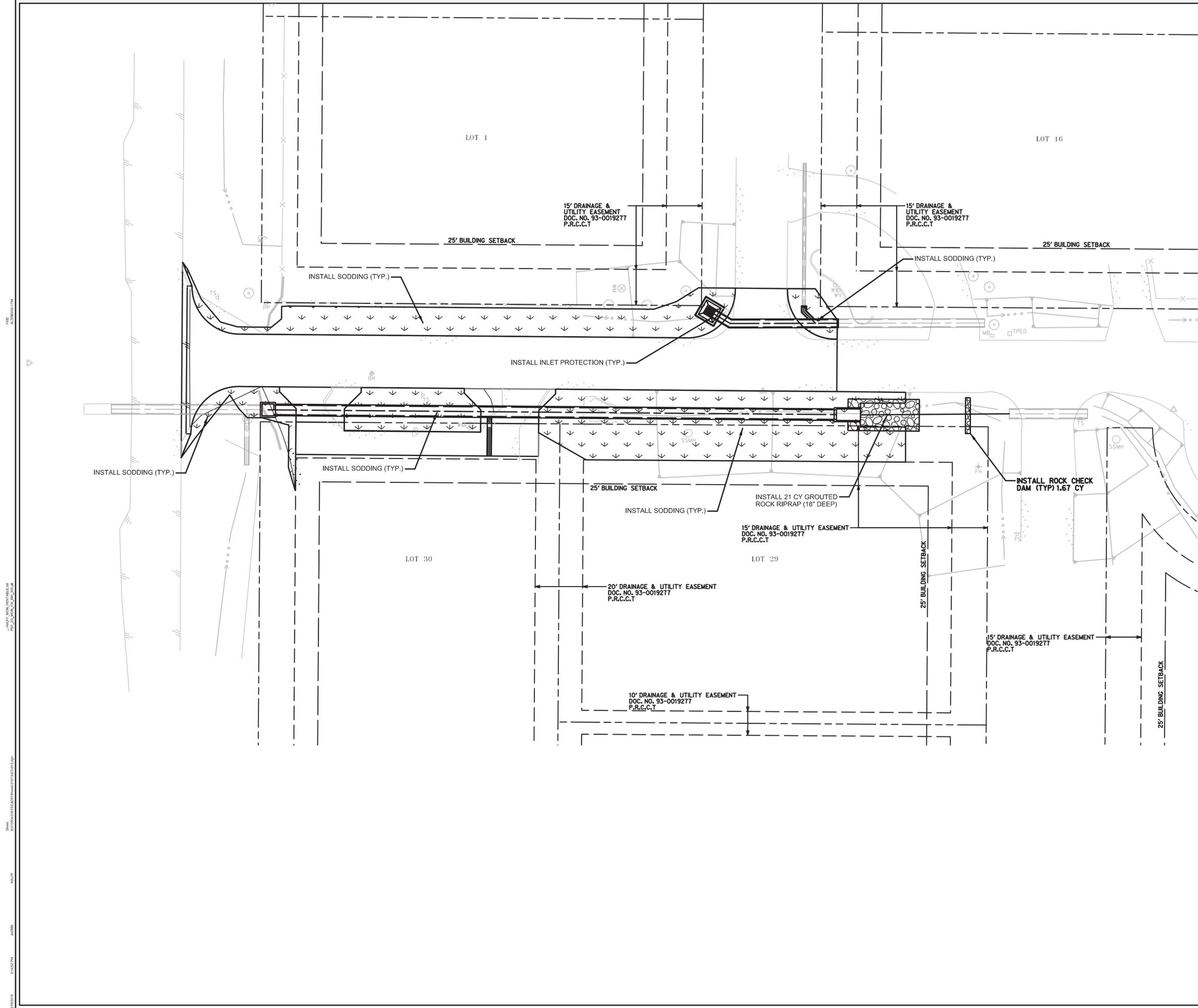
All steel components except reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

**Texas Department of Transportation** Bridge Division Standard

**PRECAST SAFETY END TREATMENT TYPE II ~ PARALLEL DRAINAGE**

**PSET-SP**

FILE: psetspss.dgn	DN: RLW	CK: KLR	DW: JTR	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS				
11-10: Add note for synthetic fibers.	DIST	COUNTY	SHEET NO.	



**LEGEND**

	SILT FENCE
	SODDING AND 4\"/>
	CONSTRUCTION ENTRANCE / EXIT
	ROCK CHECK DAM
	CURB INLET PROTECTION

**WILLOCK HILL  
ENTRY ROAD  
DRAINAGE AND  
STREET REPAIRS**  
Cellina, Texas



**HALFF**  
2605 NORTH WALNUT ST., SUITE 500  
GRAND PRAIRIE, TEXAS 75050-1487  
TEL (214) 201-1270  
FAX (214) 201-1271

Revision No.	Date	Description

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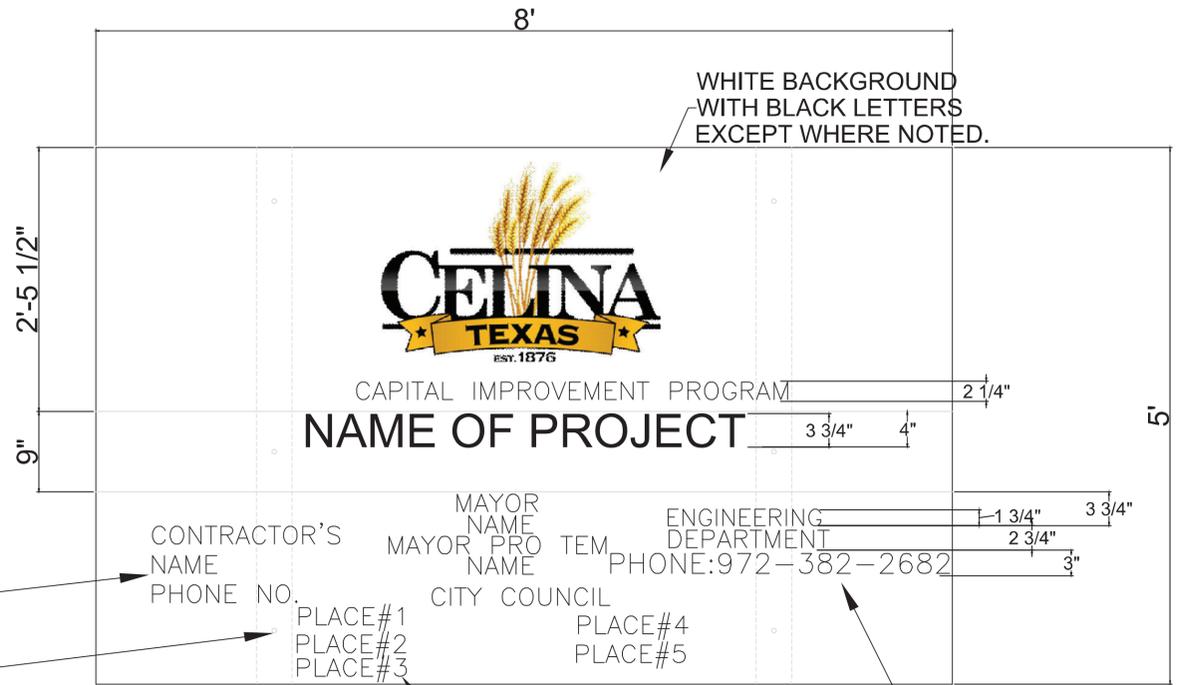
Project No.:	31013
Issued:	8/19/2016
Drawn By:	GAH
Checked By:	JFR
Scale:	AS NOTED
Sheet Title:	Sheet Title

**EROSION CONTROL**

**12**  
Sheet Number

**RECORD DRAWINGS - AUGUST 2016**  
These Record Drawings were prepared by or under the supervision of Brian C. Haynes, P.E. 90385. These Record Drawings have been prepared based on information provided by the City of Cellina, Texas. The Design Professional has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result.  
Design Consultant: Halff Associates Inc. TBPE # F-312

SWPPP NOTICE AND INFORMATION SHALL BE ATTACHED TO ALL CIP SIGNS POST ON SEPARATE BOARD WITH WEATHER PROTECTION.



WHITE BACKGROUND WITH BLACK LETTERS

WHITE BACKGROUND WITH BLACK LETTERS EXCEPT WHERE NOTED.

6"x1/2" GALV. BOLT  
6 EA. TYP.

USE 1-3/4" LETTER HEIGHT AND 1-1/4" SPACING BETWEEN LINES CENTER ON LOWER HALF OF SIGN AS SHOWN.

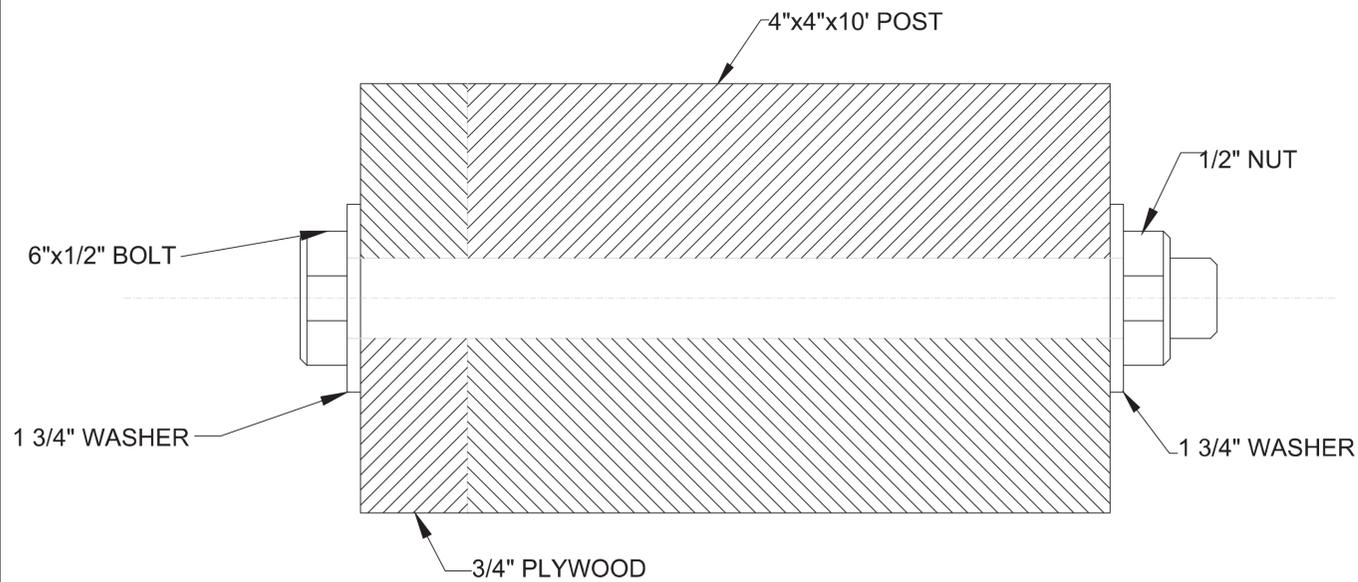
WHITE BACKGROUND WITH BLACK LETTERS

4"x4"x10' POST

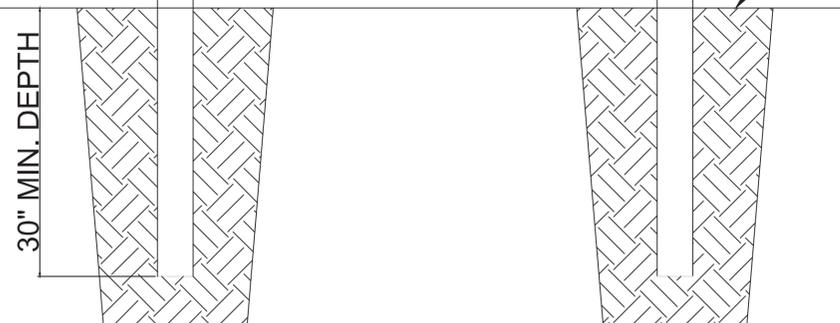
4"x4"x10' POST

1. SIGN BOARD SHALL BE 3/4" EXTERIOR RATED PLYWOOD SANDED ON FACE SIDE.
2. POST SHALL BE 4"x4"x10' PRESSURE TREATED MOUNTED 30" MIN. IN GROUND.
3. 6 EA. BOLTS SHALL BE 6"x1/2" GALV. BOLTS.

TAMPED EARTH

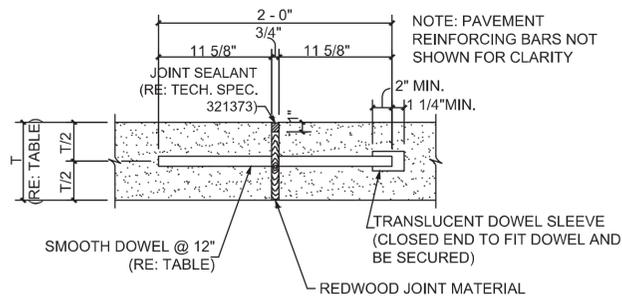


POST X-SECTION



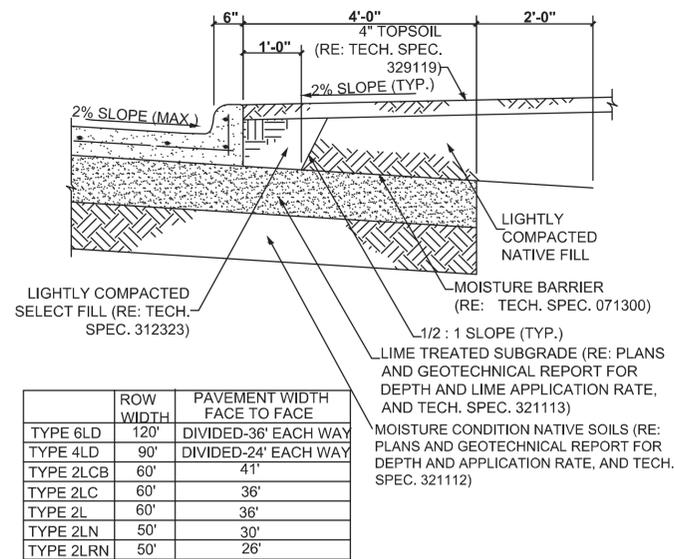
**STANDARD CAPITAL IMPROVEMENT PROJECT SIGN DETAIL**

<b>CITY OF CELINA</b>			
<b>PROJECT SIGN DETAILS</b>			
<b>STANDARD DETAILS</b>			
			
DESIGNED BY: G.F.	REV. BY:	DATE:	SYMBOL:
DRAWN BY: J.P.			
CHECKED BY: G.F.	SCALE: NOT TO SCALE	DATE: JANUARY 2016	
		JOB NO.:	
		SHEET NO.: PJS- 1	



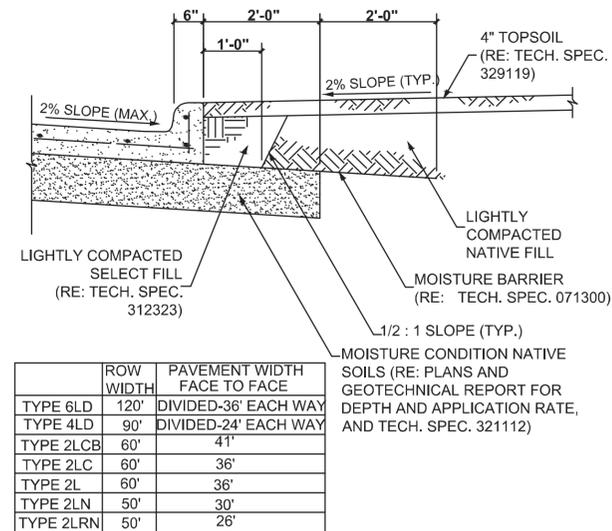
STREET CLASS	T (IN)	DOWEL SIZE (IN)	DOWEL LENGTH (L) (IN)
TYPE 6LD	9	1.0	24
TYPE 4LD	8	1.0	24
TYPE 2LCB	7	0.75	24
TYPE 2LC	6	0.75	24
TYPE 2L	6	0.75	24
TYPE 2LN	6	0.75	24
TYPE 2LRN	6	0.75	24

### CONCRETE PAVEMENT EXPANSION JOINT



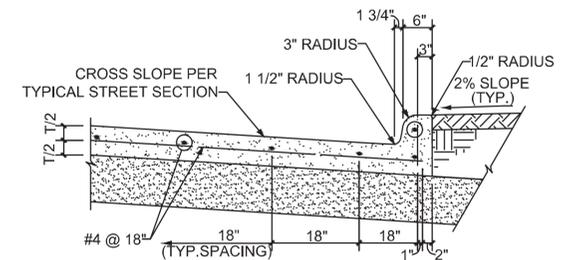
	ROW WIDTH	PAVEMENT WIDTH FACE TO FACE
TYPE 6LD	120'	DIVIDED-36' EACH WAY
TYPE 4LD	90'	DIVIDED-24' EACH WAY
TYPE 2LCB	60'	41'
TYPE 2LC	60'	36'
TYPE 2L	60'	36'
TYPE 2LN	50'	30'
TYPE 2LRN	50'	26'

### THOROUGHFARE CLASSES "6LD" THROUGH "2LRN" TYPICAL SECTION (WITH MOISTURE CONDITIONING)

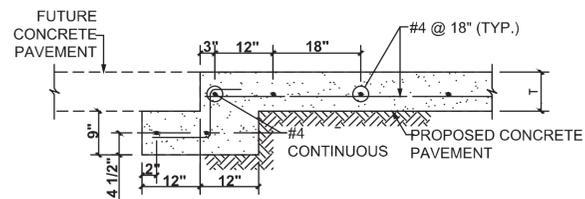


	ROW WIDTH	PAVEMENT WIDTH FACE TO FACE
TYPE 6LD	120'	DIVIDED-36' EACH WAY
TYPE 4LD	90'	DIVIDED-24' EACH WAY
TYPE 2LCB	60'	41'
TYPE 2LC	60'	36'
TYPE 2L	60'	36'
TYPE 2LN	50'	30'
TYPE 2LRN	50'	26'

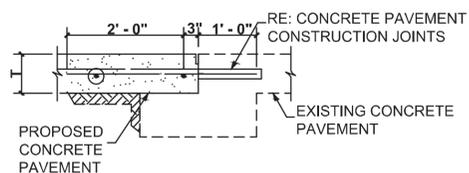
### THOROUGHFARE CLASSES "2LC" THROUGH "2LRN" TYPICAL SECTION (WITHOUT MOISTURE CONDITIONING)



### TYPICAL PAVEMENT REINFORCEMENT AND CONCRETE CURB

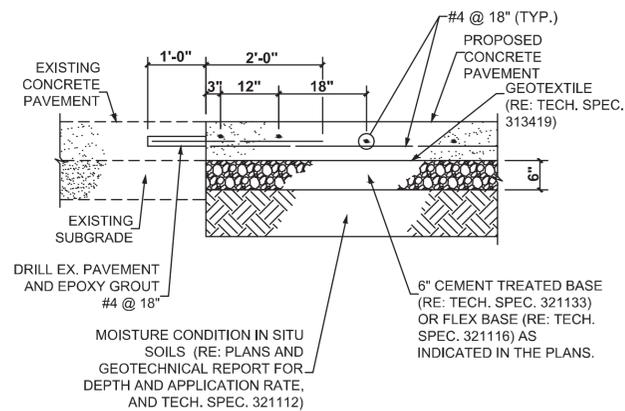


STREET HEADER FOR FUTURE CONCRETE PAVEMENT

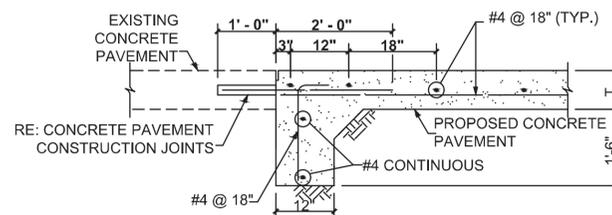


CONCRETE PAVEMENT AT STREET HEADER

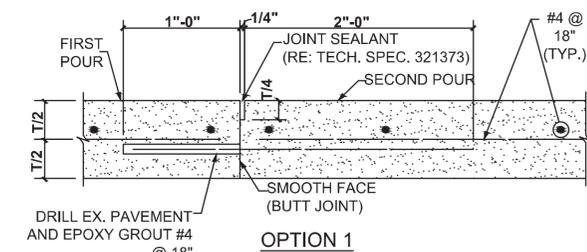
### CONCRETE STREET HEADERS



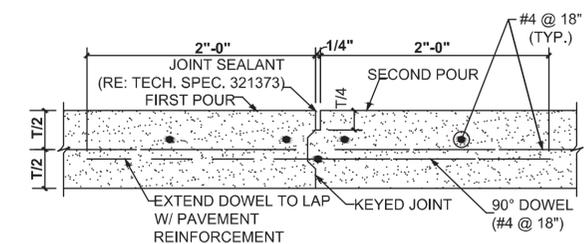
### EXISTING CONCRETE PAVEMENT WIDENING



### STREET HEADER AT EXISTING PAVEMENT



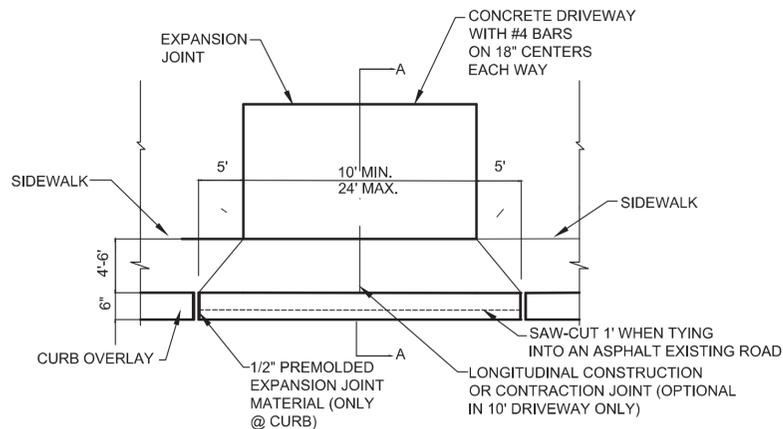
OPTION 1



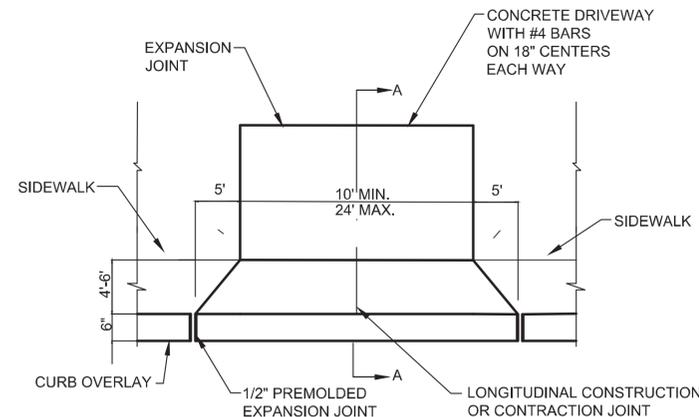
OPTION 2

### CONCRETE PAVEMENT CONSTRUCTION JOINTS

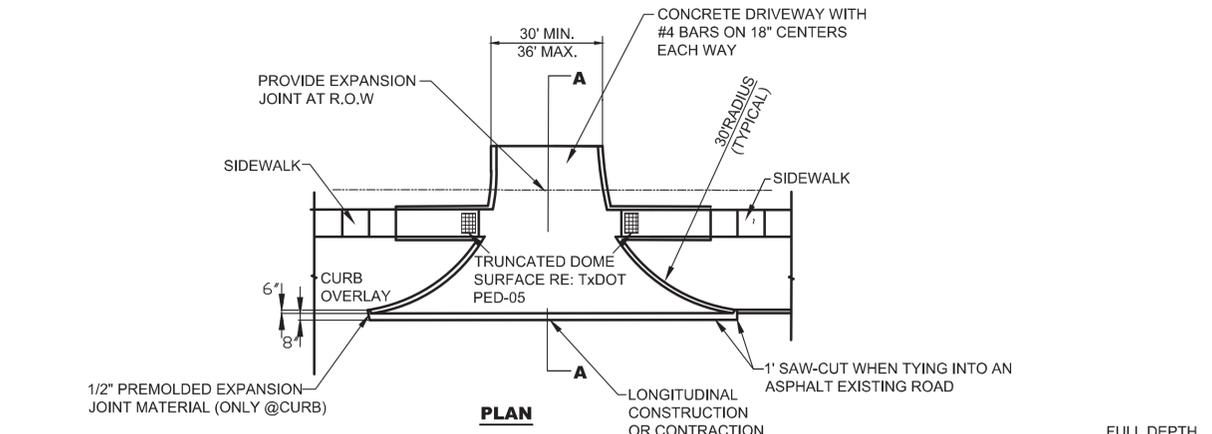
<b>CITY OF CELINA</b>			
<b>STREET DETAILS 3</b>			
<b>STANDARD DETAILS</b>			
DESIGNED BY: G.F	REV. BY	DATE	SYMBOL
DRAWN BY: J.P			DATE: JANUARY 2016
CHECKED BY: G.F			JOB NO.:
	SCALE: NOT TO SCALE		SHEET NO.: ST- 3



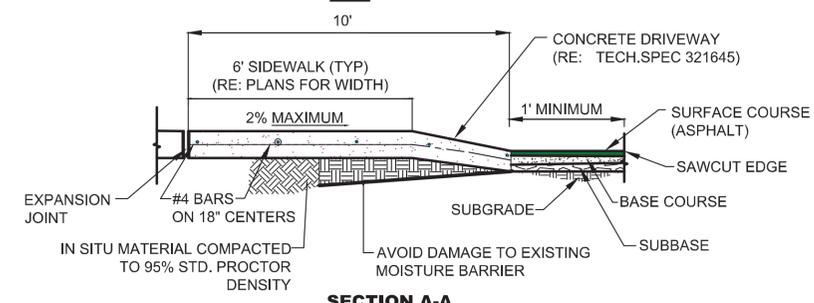
PLAN



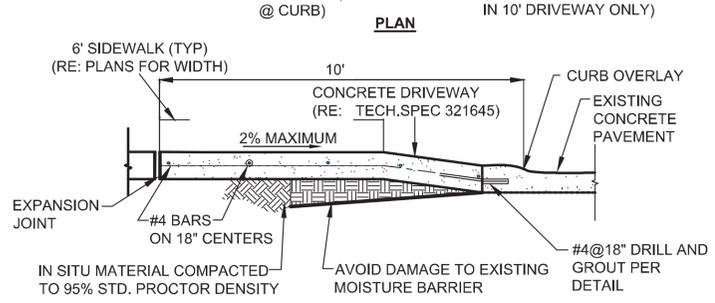
PLAN



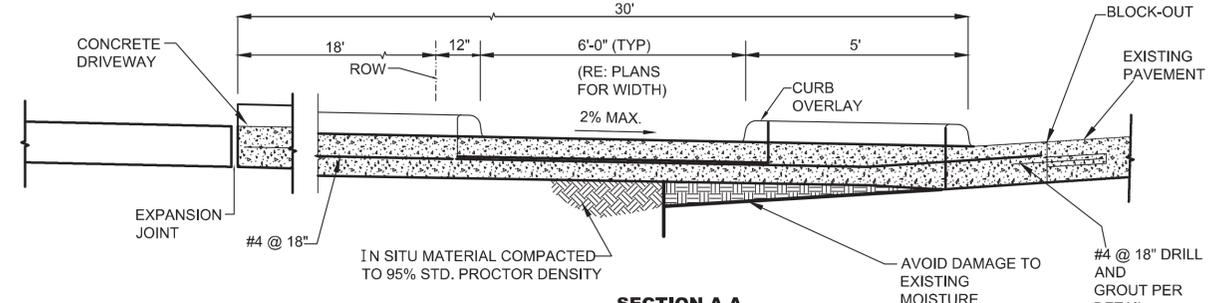
PLAN



SECTION A-A



SECTION A-A

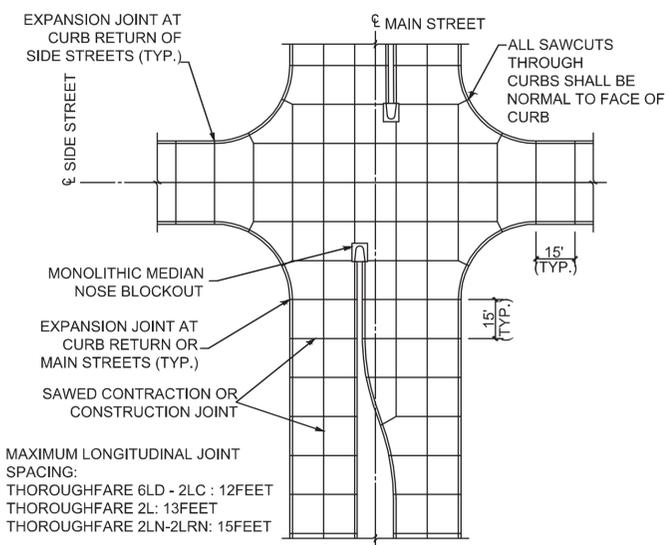


SECTION A-A

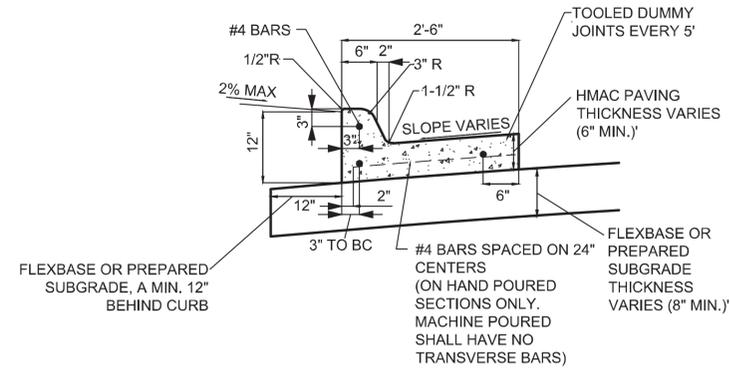
**RESIDENTIAL DRIVEWAY APPROACH JOINING EXISTING ASPHALT PAVEMENT**

**RESIDENTIAL DRIVEWAY APPROACH JOINING EXISTING CONCRETE PAVEMENT**

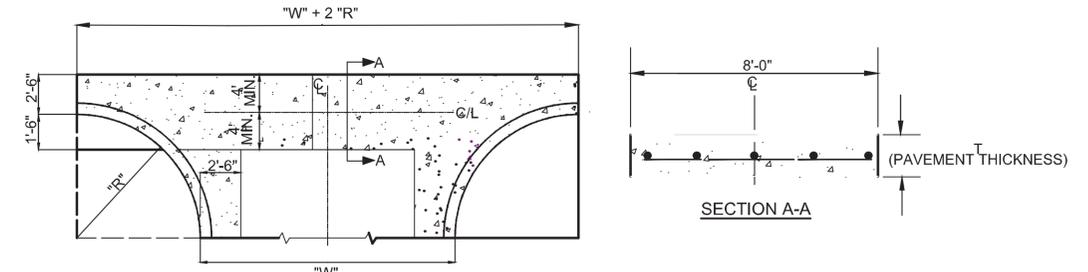
**COMMERCIAL DRIVEWAY APPROACH (RADIUS RETURN TYPE)**



**CONCRETE PAVEMENT JOINTING LAYOUT**

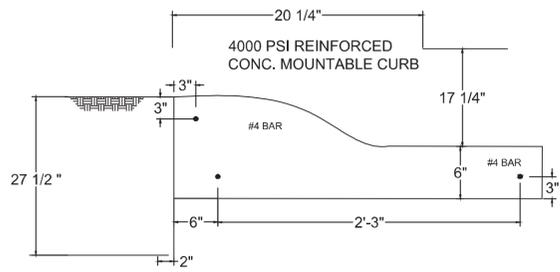


**6\"/>**



ALL CONCRETE FOR VALLEY GUTTER SHALL BE CLASS "A". REINFORCING STEEL SHALL BE # 4 BARS ON 18" CENTERS BOTH WAYS.

**VALLEY GUTTER PLAN**

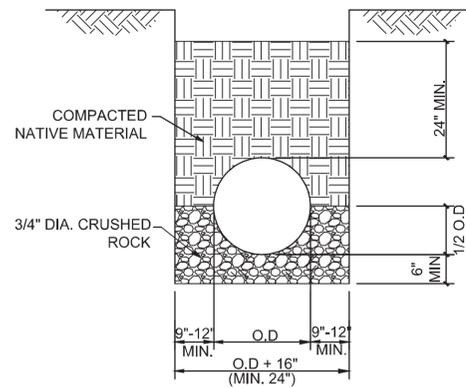


**MOUNTABLE CONCRETE CURB**

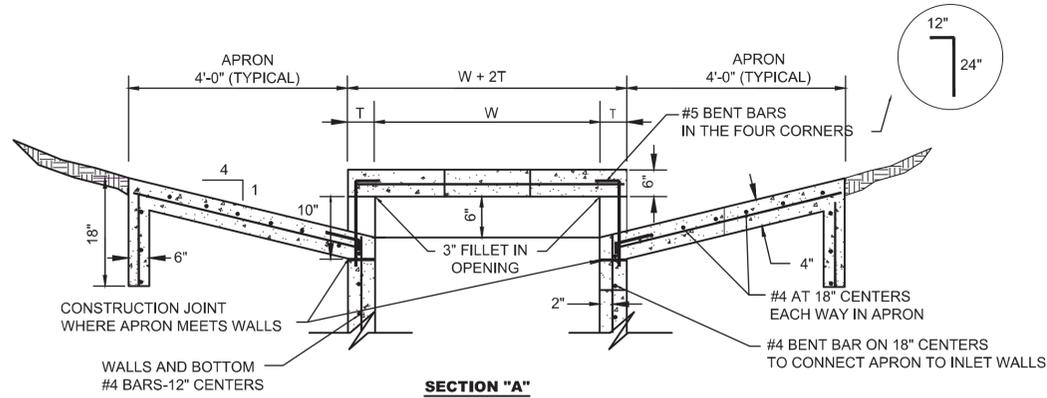
**CITY OF CELINA STREET DETAILS 4 STANDARD DETAILS**



DESIGNED BY: G.F	REV. BY	DATE	SYMBOL	DATE: JANUARY 2016
DRAWN BY: J.P				JOB NO.:
CHECKED BY: G.F				SHEET NO.: ST-4

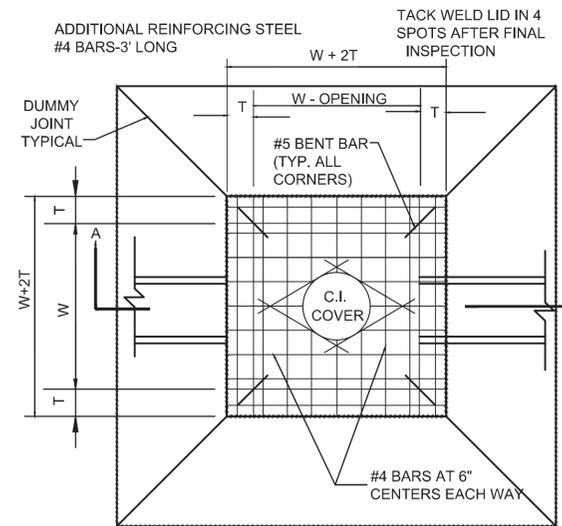


**EMBEDMENT FOR STORM SEWER LINES**

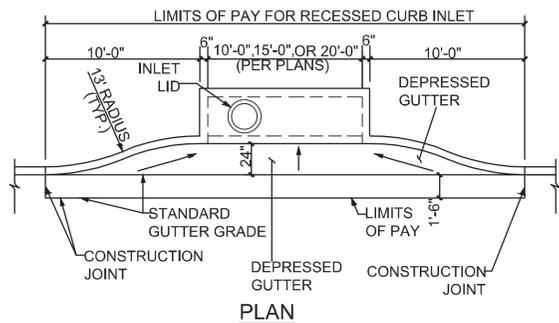


INLET SIZE	T	W
4" SQUARE	7"	4'-0"
5" SQUARE	8"	5'-0"
6" SQUARE	9"	6'-0"

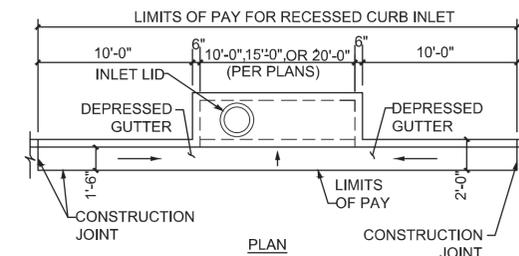
**DROP INLET**



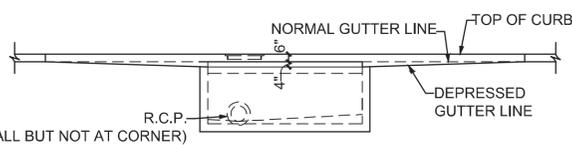
**PLAN OF TOP SLAB**



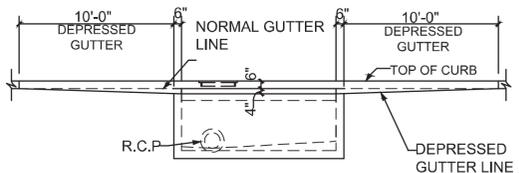
**PLAN**



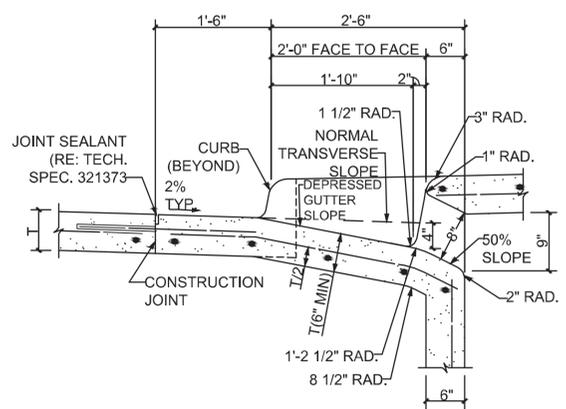
**PLAN**



**PROFILE**

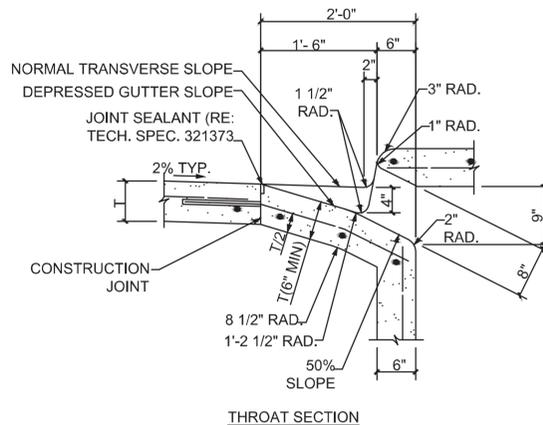


**PROFILE**



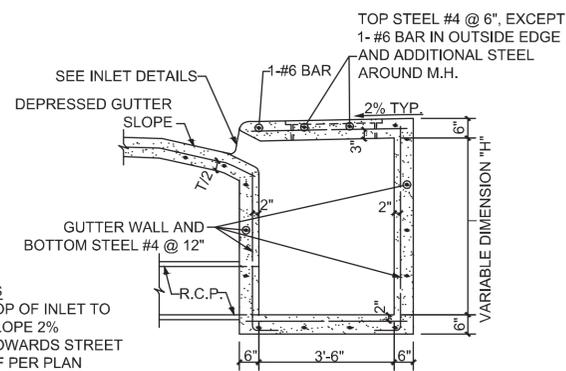
**THROAT SECTION**

**RECESSED CURB INLET**



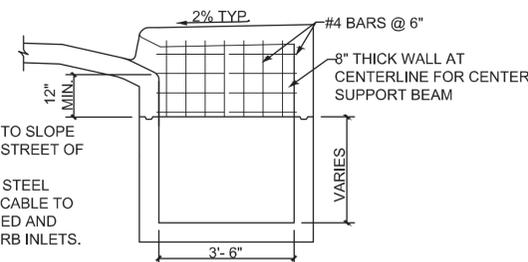
**THROAT SECTION**

**STANDARD CURB INLET**



**INLET SECTION FOR RECESSED AND STANDARD INLETS**

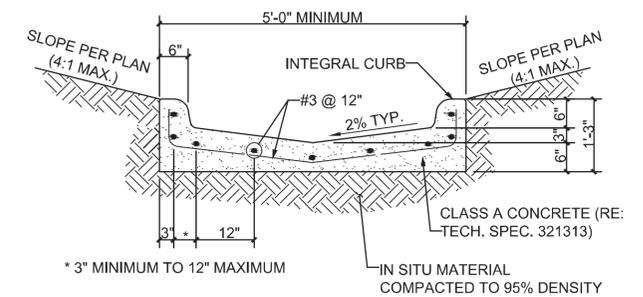
- NOTES**
- TOP OF INLET TO SLOPE 2% TOWARDS STREET OF PER PLAN



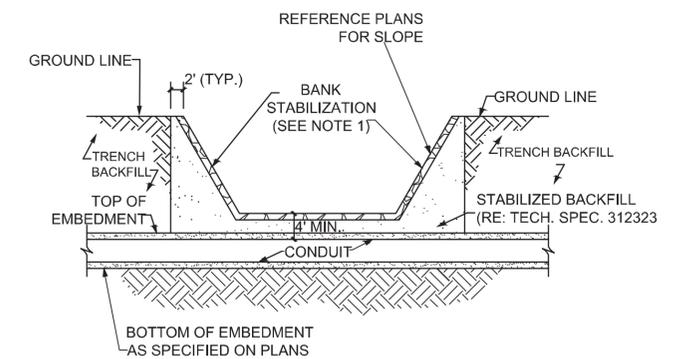
- NOTES:**
- TOP OF INLET TO SLOPE 2% TOWARDS STREET OF PER PLAN
  - REINFORCING STEEL LAYOUT APPLICABLE TO BOTH RECESSED AND ON-GRADE CURB INLETS.

**CENTER SUPPORT BEAM FOR 15' & 20' RECESSED AND STANDARD INLETS**

**CENTER SUPPORT BEAM & INLET SECTION FOR RECESSED AND STANDARD INLETS**



**CURBED FLUME**

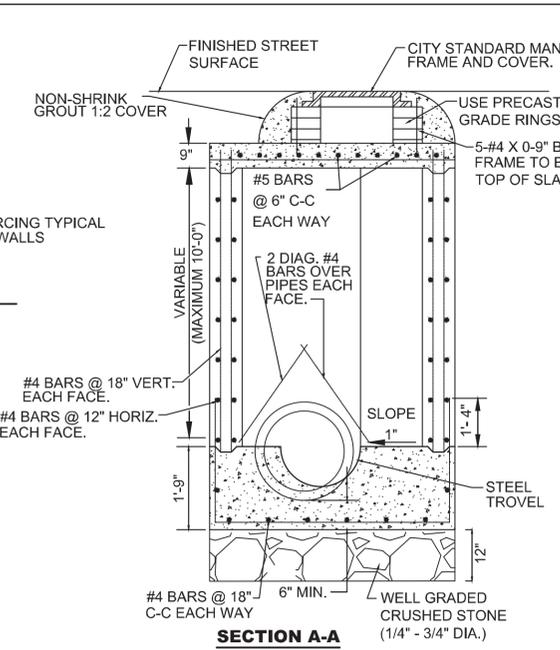
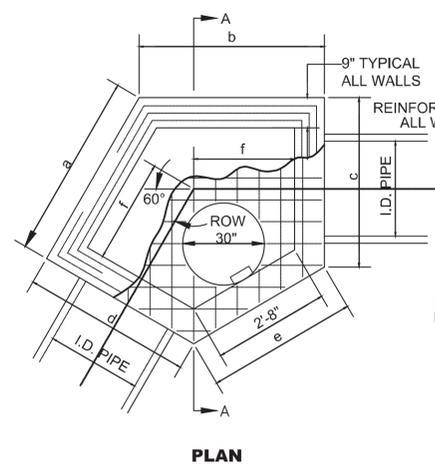
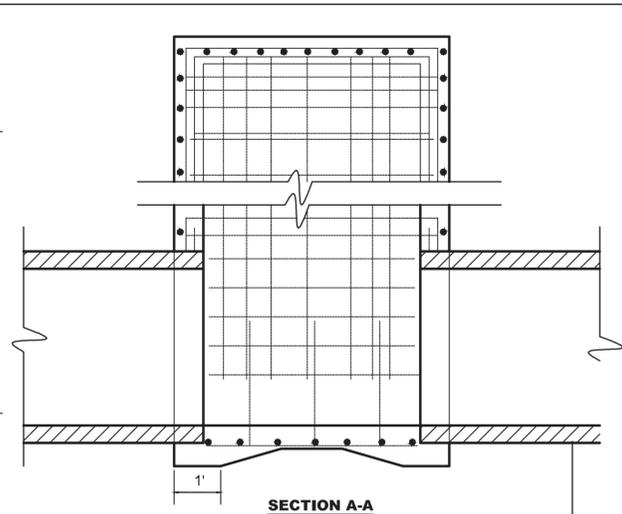
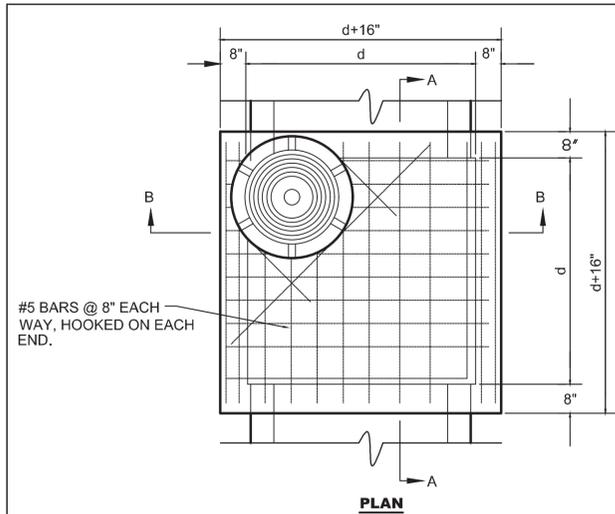


**INFILTRATION PROTECTION CONDUIT UNDER CHANNEL**

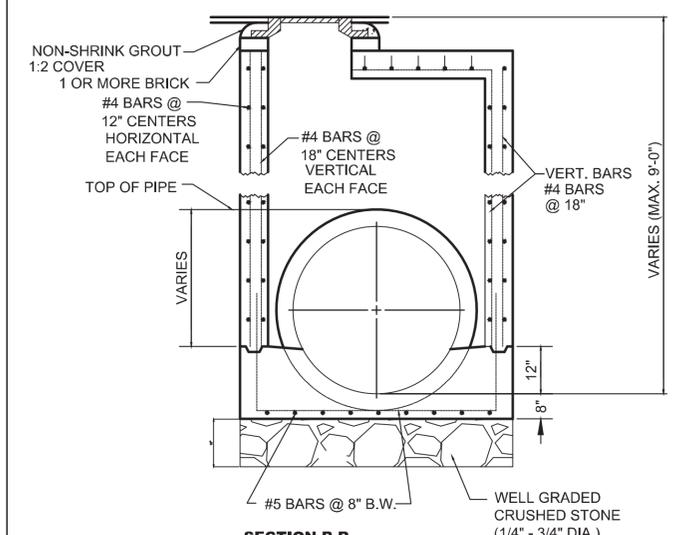
**CITY OF CELINA  
STORM DRAIN DETAILS 1  
STANDARD DETAILS**



DESIGNED BY: G.F.	REV. BY:	DATE:	SYMBOL:	DATE: JANUARY 2016
DRAWN BY: J.P.				JOB NO.:
CHECKED BY: G.F.				SHEET NO.: SD-1



NO.	PIPE SIZES	a	b	c	d	e	f
1	18"-24"	4'-5 1/2"	4'-5 1/2"	4'-2"	4'-2"	3'-6 1/2"	2'-5"
2	27"-33"	4'-11 5/8"	4'-11 5/8"	5'-1"	5'-1"	3'-6 3/8"	2'-8"
3	36"-42"	5'-5 5/8"	5'-5 5/8"	5'-11 1/4"	5'-11 1/4"	3'-6 3/8"	2'-11"
4	48"-54"	6'-1 3/4"	6'-1 3/4"	7'-1 1/4"	7'-1 1/4"	3'-6 1/2"	3'-3"
5	60"-66"	6'-9 7/8"	5'-9 7/8"	8'-3 1/4"	8'-3 1/4"	3'-6 1/2"	3'-7"
6	72"-78"	7'-6"	7'-6"	9'-5 1/4"	9'-5 1/4"	3'-6 1/2"	3'-11"
7	84"-96"	8'-6 1/8"	8'-6 1/8"	11'-2 1/4"	11'-2 1/4"	3'-6 1/2"	4' 5 1/2"

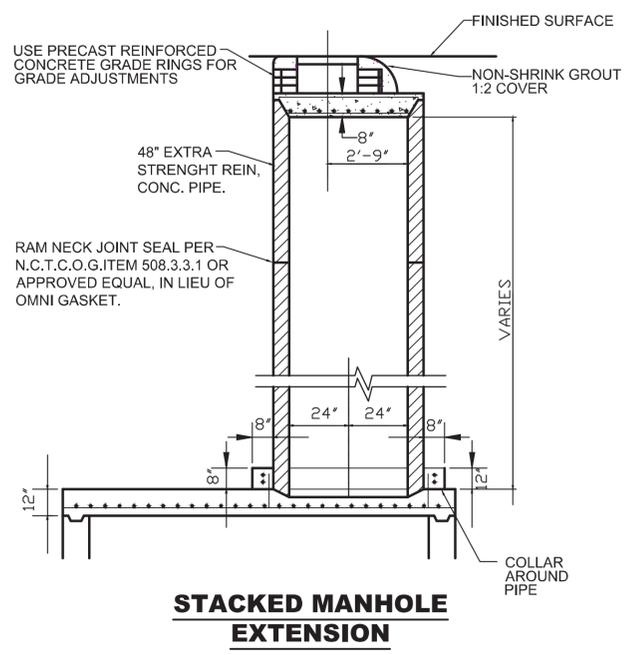
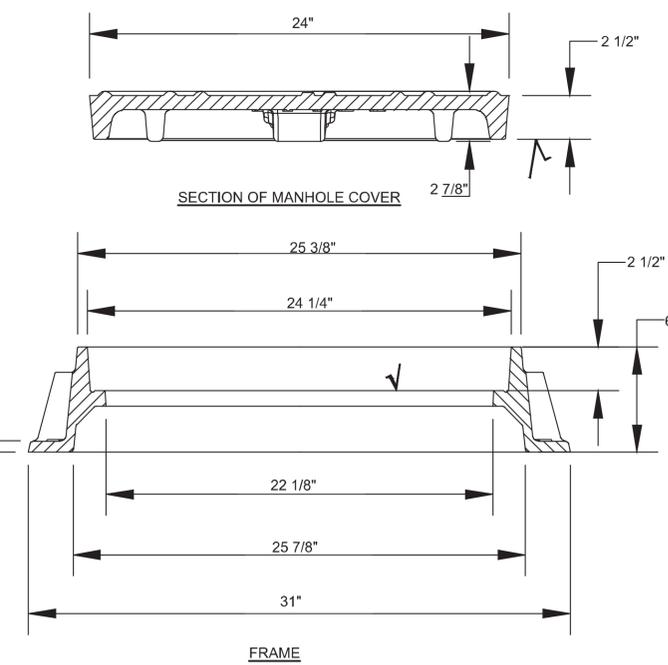
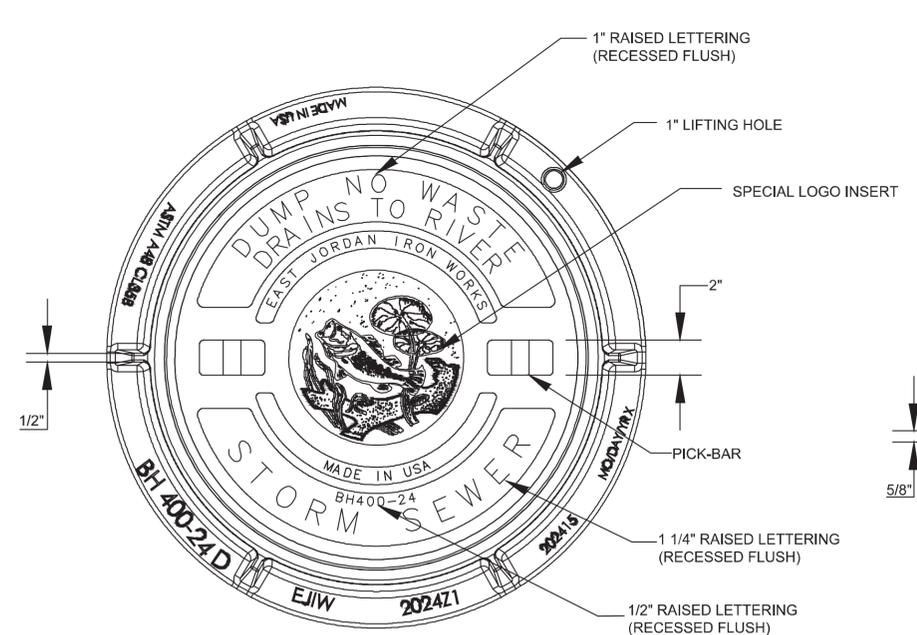


CORNER

PIPE SIZES	d
24"-39"	5'
42"-48"	6'
54"-60"	7'
66"-72"	8'

**TYPE "B" MANHOLE**

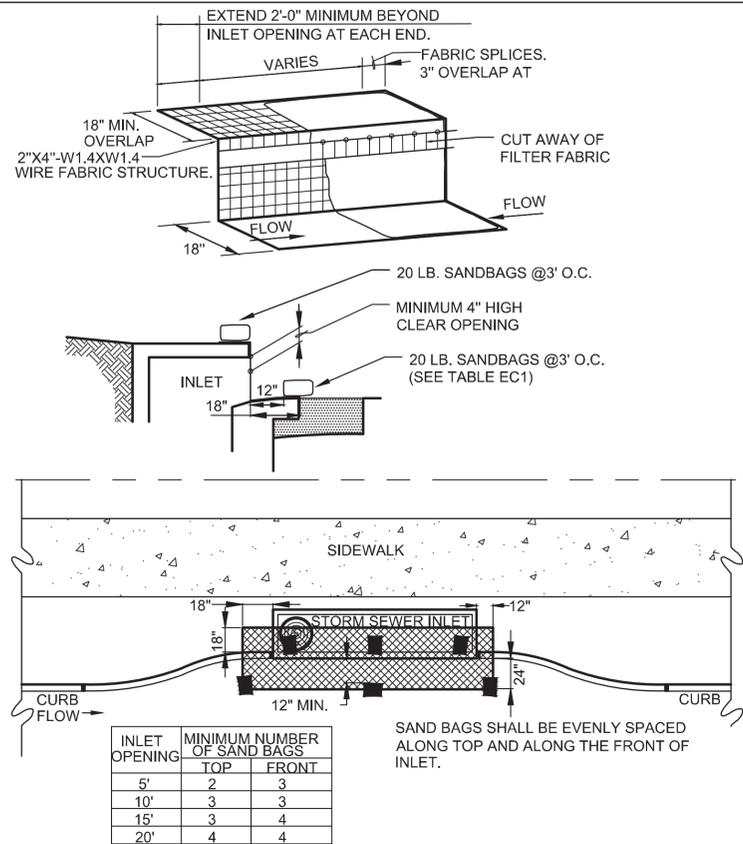
**TYPE "A" MANHOLE**



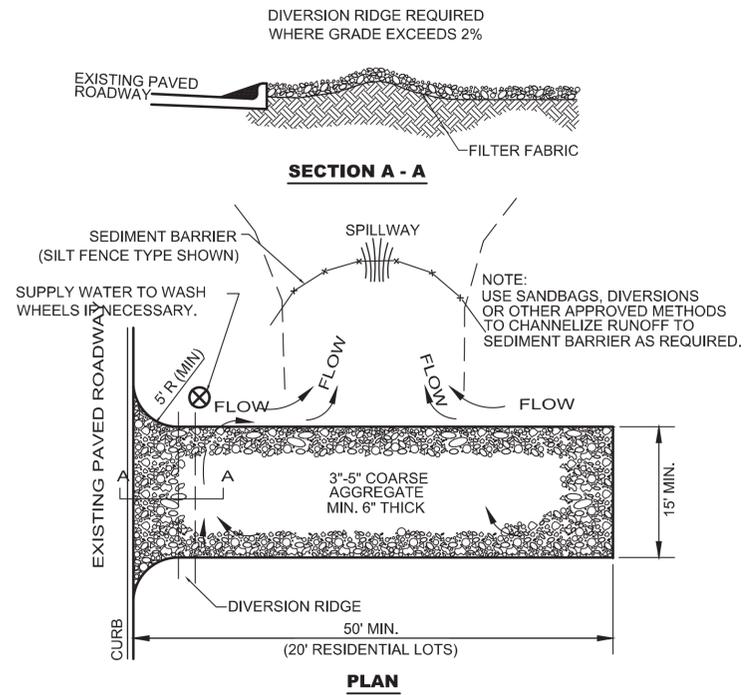
**MANHOLE RING & COVER DETAIL**

**CITY OF CELINA**  
**STORM DRAIN DETAILS 2**  
**STANDARD DETAILS**

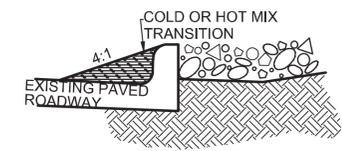
DESIGNED BY: G.F.	REV. BY	DATE	SYMBOL	DATE: JANUARY 2016
DRAWN BY: J.P.				JOB NO.:
CHECKED BY: G.F.	SCALE: NOT TO SCALE			SHEET NO.: SD-2



**CURB INLET ON GRADE PROTECTION DETAIL**

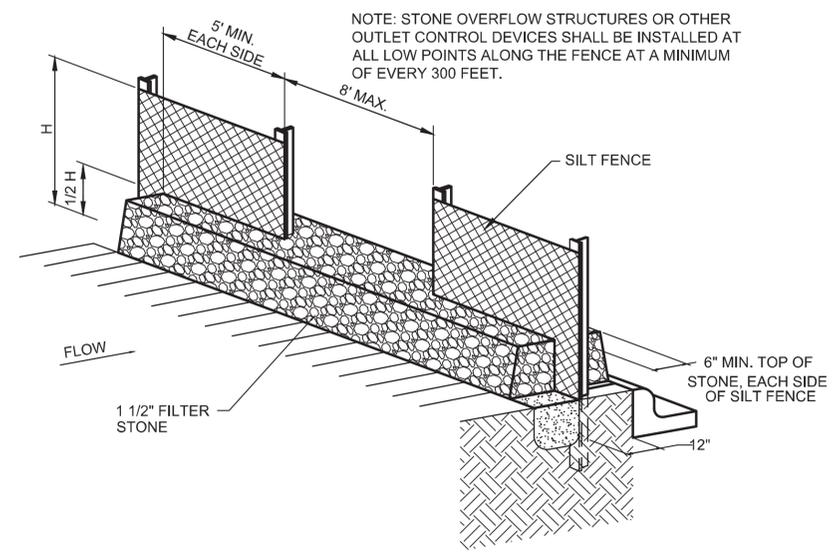


WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE-GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.

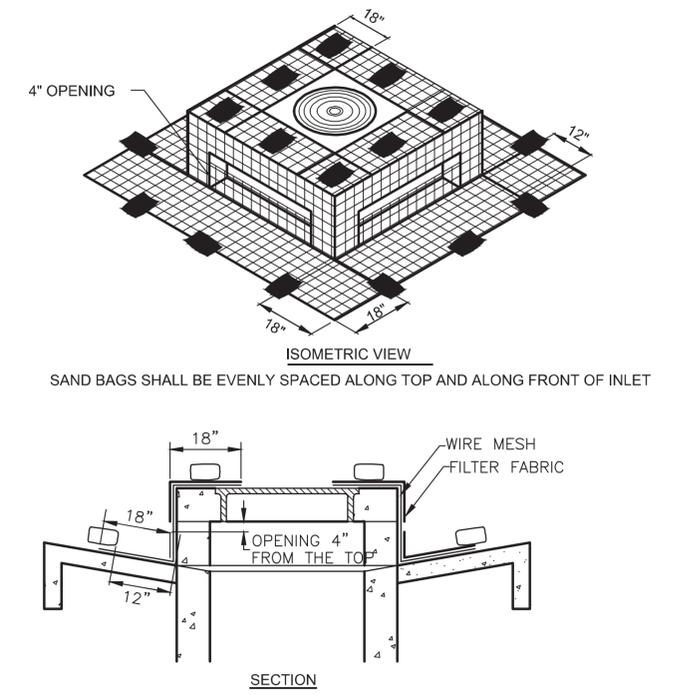


**TRANSITION**

**TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIST**

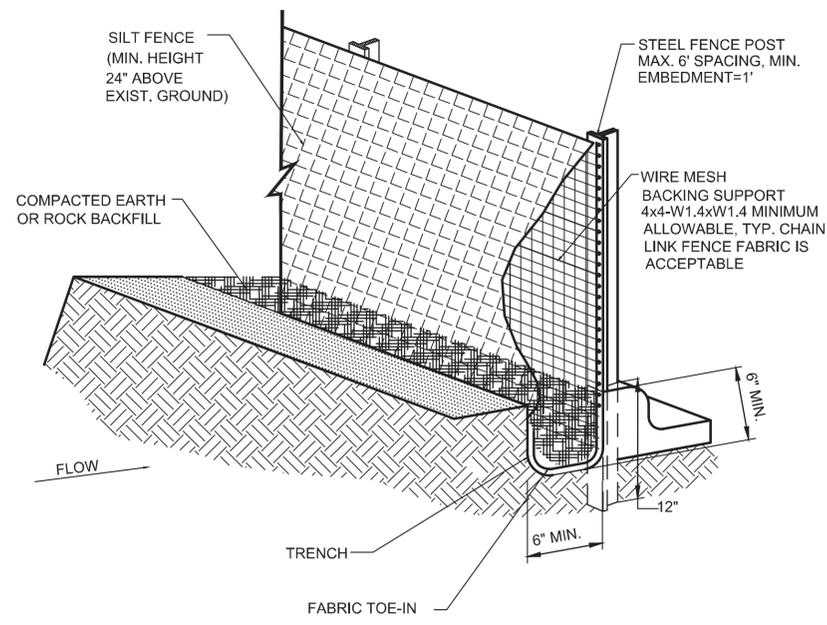


**SILT FENCE STONE OVERFLOW STRUCTURE**



**FILTER FABRIC WYE INLET PROTECTION**

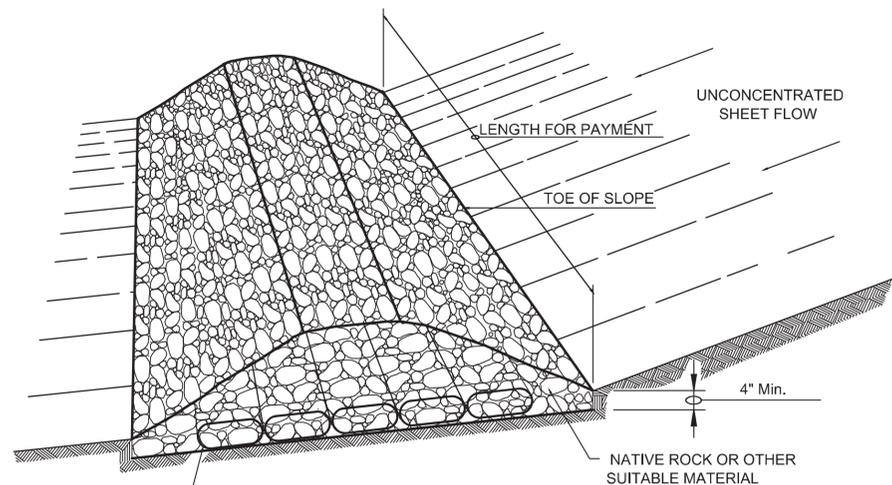
SAND BAGS SHALL BE EVENLY SPACED ALONG TOP AND ALONG FRONT OF INLET



**SILT FENCE ISOMETRIC PLAN VIEW**

**CITY OF CELINA**  
**EROSION CONTROL DETAILS 1**  
**STANDARD DETAILS**

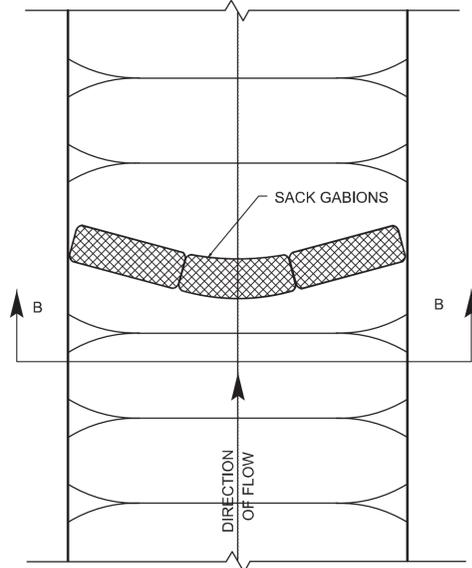
DESIGNED BY: G.F.	REV. BY	DATE	SYMBOL	DATE: JANUARY 2016
DRAWN BY: J.P.				JOB NO.:
CHECKED BY: G.F.	SCALE: NOT TO SCALE			SHEET NO.: EC-1



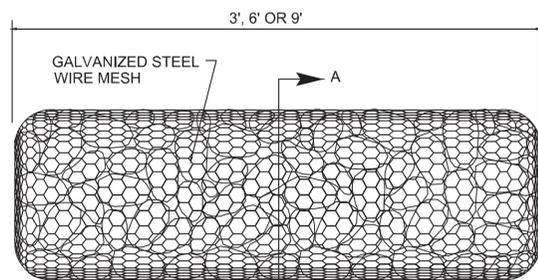
**FILTER DAM AT TOE OF SLOPE**

RFD1  
TYPE 1

OPTIONAL SANDBAGS  
(SEE USAGE GUIDELINES)

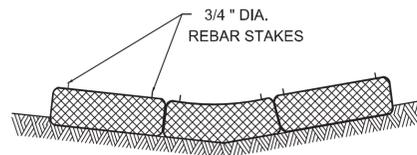


PLAN VIEW

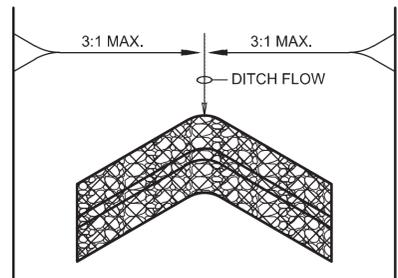


TYPE 4 (SACK GABIONS)

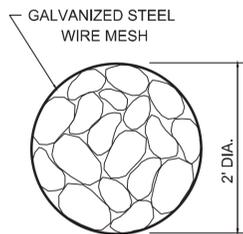
**SACK GABIONS**



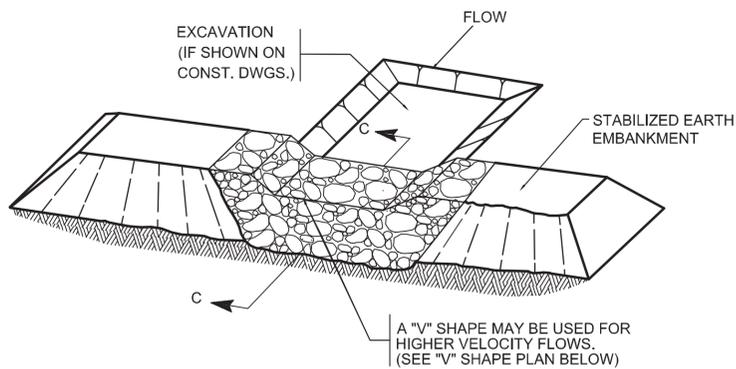
SECTION B-B



V SHAPE  
(PLAN VIEW)

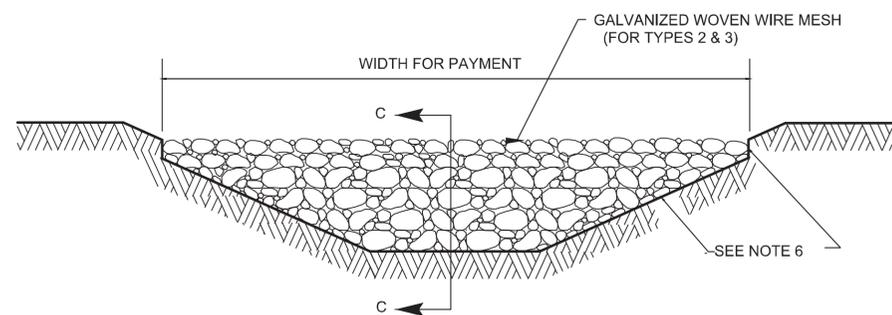


SECTION A-A



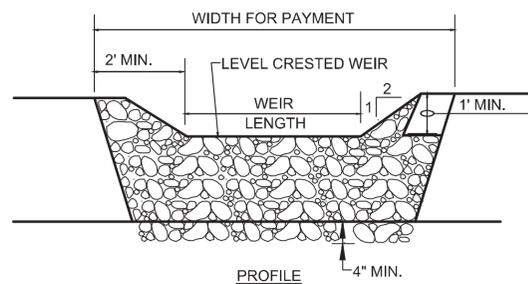
**FILTER DAM AT SEDIMENT TRAP**

RFD1 OR RFD2  
TYPE 1 OR TYPE 2

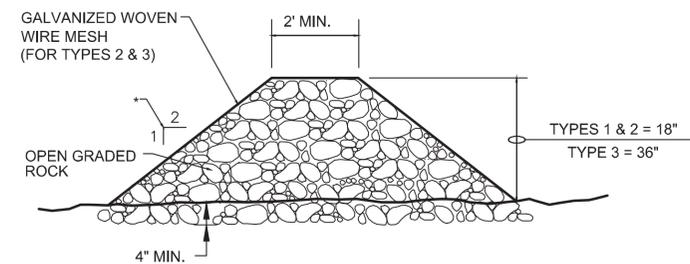


**FILTER DAM AT CHANNEL SECTIONS**

RFD1 OR RFD2 OR RFD3  
TYPE 1 OR TYPE 2



PROFILE



\* STONE SIDE SLOPES SHOULD BE 2:1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES OF 6:1 OR FLATTER.

SECTION C-C

**ROCK FILTER DAM**

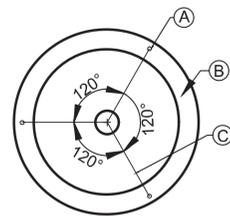
**PLANS SHEET LEGEND**

- TYPE 1 ROCK FILTER DAM — RFD1
- TYPE 2 ROCK FILTER DAM — RFD2
- TYPE 3 ROCK FILTER DAM — RFD3

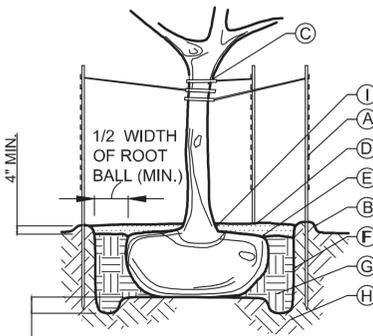
**CITY OF CELINA**  
**EROSION CONTROL DETAILS 2**  
**STANDARD DETAILS**



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CHECKED BY: G.F.	SCALE : NOT TO SCALE			SHEET NO.: EC-2



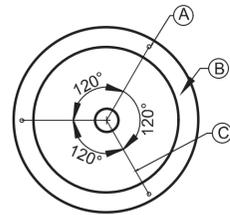
PLAN



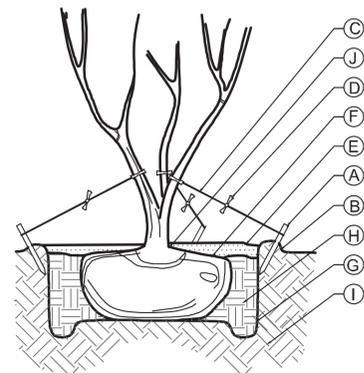
SECTION

**LEGEND**

- (A) 2" X 2" X 8' STEEL POST APPROVED STAKES, 3 PER TREE, SPACED EQUALLY, DRIVEN 2" INTO GROUND
- (B) 4" EARTH SAUCER (12" WIDE)
- (C) ArborTie PRODUCT INSTALLED PER CITY-APPROVED MANUFACTURER'S SPECIFICATIONS
- (D) 1" COMPOST & 3" CYPRESS MULCH, KEEP 3-4" BACK FROM ROOT FLARE. (RE: TECH. SPEC. 329301)
- (E) ROOT BALL: REMOVE BURLAP, BURLAP TIES, AND WIRE BASKET FROM TOP 2/3 OF ROOT BALL. REMOVE ALL NYLON STRINGS, PLASTIC LINERS, AND OTHER SYNTHETIC MATERIALS FROM THE ENTIRE ROOT BALL.
- (F) PLANTING PIT SHALL BE EXCAVATED TWO TIMES WIDTH OF ROOT BALL. PIT DEPTH SHALL BE AS NEEDED TO SET ROOT BALL COLLAR AT PROPOSED FINISHED GRADE. PLACE ROOT BALL ON SOLID SOIL AND NOT LOOSE BACKFILL.
- (G) PIT BACKFILL SOIL (RE: TECH. SPEC. 329301)
- (H) UNDISTURBED EARTH
- (I) EXPOSE ROOT FLARE



PLAN



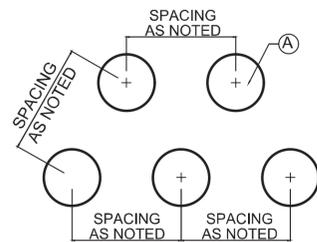
SECTION

**LEGEND**

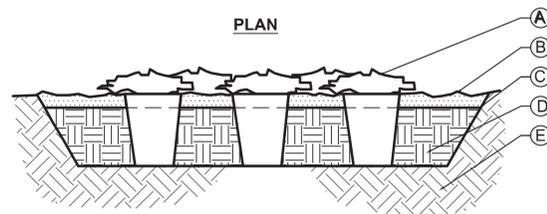
- (A) 2" X 2" X 24" WOOD STAKE, 3 PER TREE, SPACED EQUALLY
- (B) 4" EARTH SAUCER (12" WIDE) ArborTie PRODUCT INSTALLED PER CITY-APPROVED MANUFACTURER'S SPECIFICATIONS
- (C) WARNING FLAGS
- (D) 1" COMPOST & 3" CYPRESS MULCH, KEEP 3-4" BACK FROM ROOT (RE: TECH. SPEC. 329301)
- (E) ROOT BALL: REMOVE BURLAP, BURLAP TIES, AND WIRE BASKET FROM TOP 2/3 OF ROOT BALL. REMOVE ALL NYLON STRINGS, PLASTIC LINERS, AND OTHER SYNTHETIC MATERIALS FROM THE ENTIRE ROOT BALL.
- (G) PLANTING PIT SHALL BE EXCAVATED TWO TIMES WIDTH OF ROOT BALL. PIT DEPTH SHALL BE AS NEEDED TO SET ROOT BALL COLLAR AT PROPOSED FINISHED GRADE. PLACE ROOT BALL ON SOLID SOIL AND NOT LOOSE BACKFILL.
- (H) PIT BACKFILL SOIL (RE: TECH. SPEC. 329301)
- (I) UNDISTURBED EARTH
- (J) EXPOSE ROOT

**TREE PLANTING (MULTI-TRUNK)**

**TREE PLANTING (SINGLE TRUNK)**



PLAN



SECTION

**LEGEND**

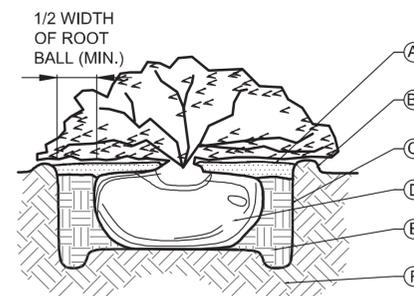
- (A) GROUND COVER PER PLAN ( RE: TECHNICAL SPECIFICATION 329300
- (B) 1" COMPOST AND 3" CYPRESS MULCH ( RE: TECH. SPEC. 329301
- (C) STEEL EDGING WHERE BEDS MEET LAWNS ( RE" STEEL EDGING DETAIL SHEET)
- (D) PIT BACKFILL SOIL ( RE: TECH. SPEC. 329301)
- (E) UNDISTURBED EARTH

**GROUNDCOVER PLANTING**

**LEGEND**

- (A) CLASS A CONCRETE ( RE: TECH. SPEC. 321313) WITH SAWCUTS 1/8" TO 3/16" WIDE AND ONE-THIRD THE DEPTH OF THE ACTUAL THICKNESS AT 6" OC ( MAXIMUM)
- (B) 1/2" TOOLED RADIUS EDGE (TYP.)
- (C) 2- #4 BAR CONTINUOUS
- (D) PLANTING BED OR SOD
- (E) PIT BACKFILL SOIL ( RE: TECH. SPEC. 329301)
- (F) UNDISTURBED EARTH

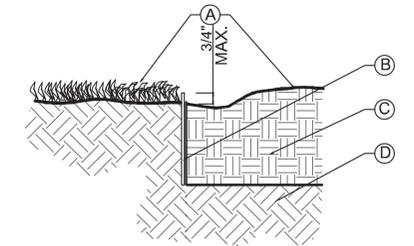
**CONCRETE MOW STRIP**



**LEGEND**

- (A) 1" COMPOST & 3" CYPRESS (RE: TECH. SPEC. 329301)
- (B) 4" EARTH SAUCER (12" WIDE)
- (C) PLANTING PIT SHALL BE EXCAVATED TWO TIMES WIDTH OF ROOT BALL. PIT DEPTH SHALL BE AS NEEDED TO SET ROOT BALL COLLAR AT PROPOSED FINISHED GRADE. PLACE ROOT BALL ON SOLID SOIL AND NOT LOOSE BACKFILL. SCARIFY SIDES OF PIT, PROVIDE CONTINUOUS PIT FOR MASS BED PLANTINGS.
- (D) ROOT BALL: REMOVE BURLAP, BURLAP TIES, AND WIRE BASKET FROM TOP 2/3 OF ROOT BALL. REMOVE ALL NYLON STRINGS, PLASTIC LINERS, AND OTHER SYNTHETIC MATERIALS FROM THE ENTIRE ROOT BALL.
- (E) PIT BACKFILL SOIL (RE: TECH. SPEC. 329301)
- (F) UNDISTURBED EARTH

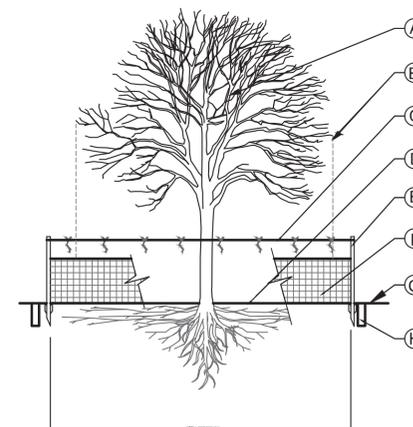
**SHRUB PLANTING**



**LEGEND**

- (A) DIFFERENT PLANTING TREATMENT
- (B) STEEL EDGING WHERE BEDS MEET LAWN PER CITY APPROVED-MANUFACTURER'S INSTRUCTIONS
- (C) PIT BACKFILL SOIL ( RE: TECH. SPEC. 329301)
- (D) UNDISTURBED EARTH

**STEEL EDGING**



**LEGEND:**

- (A) EXISTING TREE (S) TO REMAIN
- (B) DRIP LINE OF EXISTING TREE (TYP.)
- (C) CONTINUOUS NYLON TIE STRING TIED TO STAKE TOPS W/ 2' TUNDRA WEIGHT ORANGE STREAMERS AT 3' O.C.
- (D) EXISTING GRADE TO REMAIN
- (E) 2" X 2" X 8' STEEL POST T-STAKES, 8' O.C. MIN. DRIVEN 2' INTO GROUND AT (OR 'OUTSIDE) TREE DRIP LINE
- (F) 4' MIN. HEIGHT ORANGE PLASTIC FENCING INSTALLED PER CITY-APPROVED MANUFACTURER'S SPECIFICATIONS
- (G) EXISTING GRADE TO BE DISTURBED
- (H) ROOT PRUNING TRENCH 12" OUTSIDE FENCE

**NOTES FOR TREE PROTECTION**

1. PERFORM ROOT PRUNING ON ALL EXISTING TREES TO REMAIN WHERE CONSTRUCTION ACTIVITY FALLS WITHIN DRIP LINE OR EXISTING TREES.
2. NO GRADING, PARKING, STORAGE OR ANY OTHER CONSTRUCTION ACTIVITY WITHIN FENCED AREA.
3. REFER TO TECHNICAL SPECIFICATION 329600.
4. TREE PRUNING BY CERTIFIED TREE TRIMMER OR ARBORIST.

**TREE PROTECTION**

**CITY OF CELINA  
TREE PLANTING DETAILS 1  
STANDARD DETAILS**



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CHECKED BY: G.F	SCALE: NOT TO SCALE			SHEET NO.: TP - 1