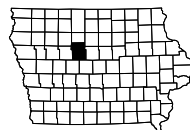


WEBSTER COUNTY

RCB CULVERT REPLACEMENT
BRFN-175-6(41)--39-94

LETTING DATE
DEC 17 2024



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 4	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	"Mainline Name"
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 4	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
WEBSTER COUNTY
RCB CULVERT REPLACEMENT
 Drainage Ditch #52 0.8 mi E of Co Rd P29

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL
13

PROJECT IDENTIFICATION NUMBER
20-94-175-030
PROJECT NUMBER
BRFN-175-6(41)--39-94
R.O.W. PROJECT NUMBER
STPN-175-6(42)-2J-94

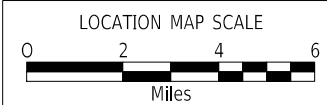
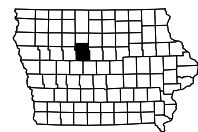
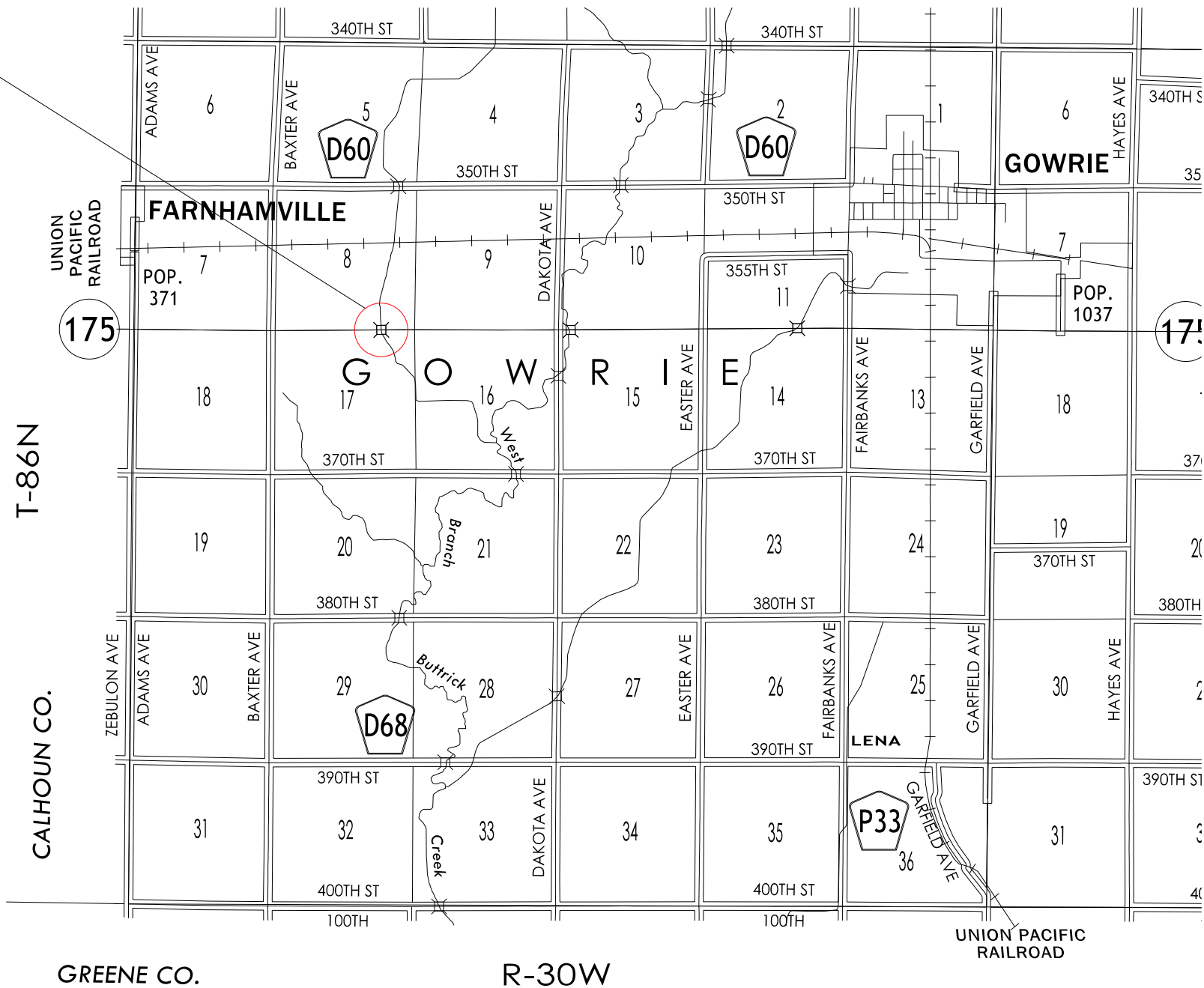
INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Kelly C. Bell	Primary Signature Block	X
X	X	X	X

PRELIMINARY PLANS

Subject to change by final design.

D2 /D3 PLAN – Date: 2/22/23

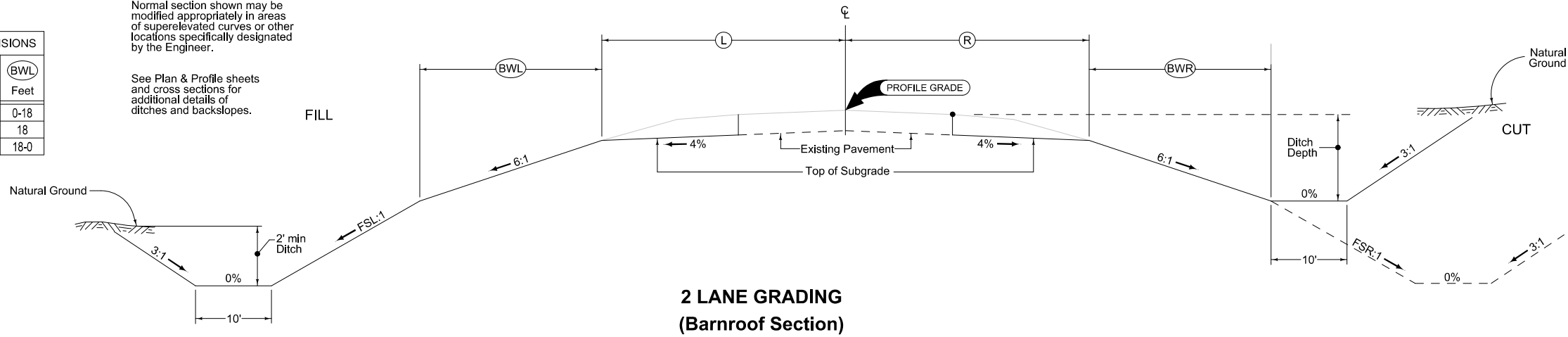
Drainage Ditch #52
 Sta. 980+73.19
 FHWA# 52350 (EXST)
 MAINT. No. 9413.4S175



LOCATION		DIMENSIONS	
STATION TO STATION		(L) Feet	(BWL) Feet
979+79.06	980+46.17	16	0-18
980+46.17	981+00.27	16	18
981+00.27	981+67.50	16	18-0

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

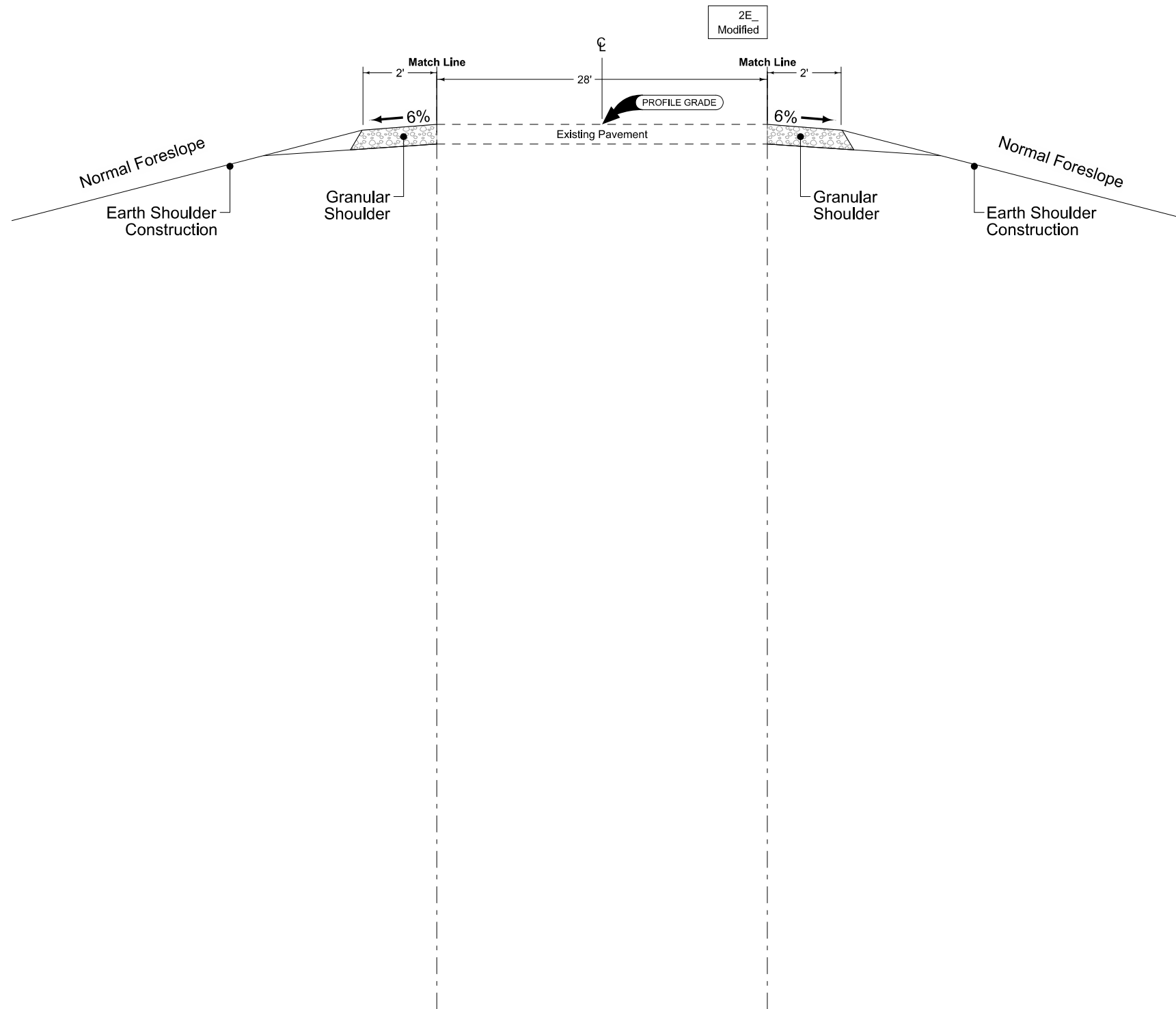
See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.



LOCATION		DIMENSIONS	
STATION TO STATION		(R) Feet	(BWR) Feet
979+79.06	980+46.17	16	0-18
980+46.17	981+00.27	16	18
981+00.27	981+67.50	16	18-0

Granular Shoulder

STATION TO STATION		Ⓞ Feet
979+79.06	981+67.50	2

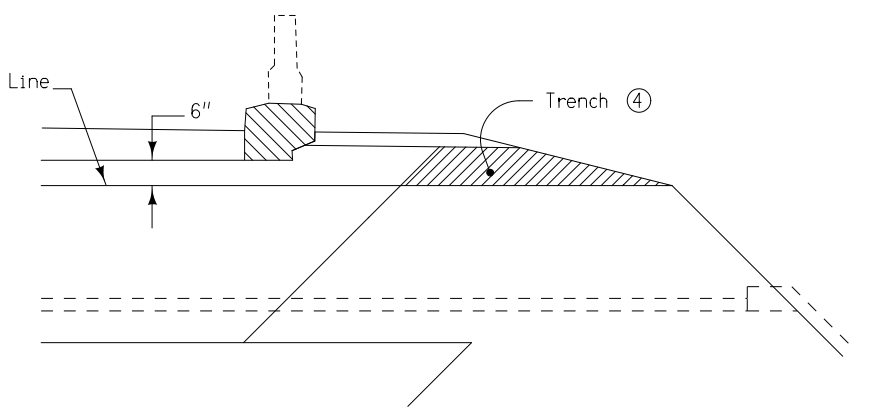
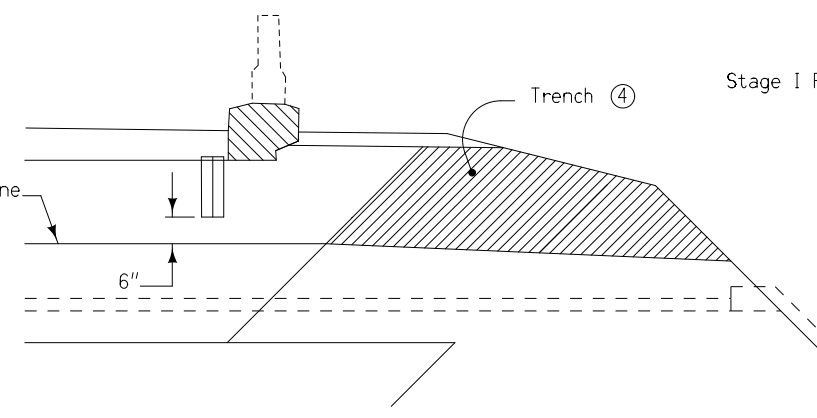
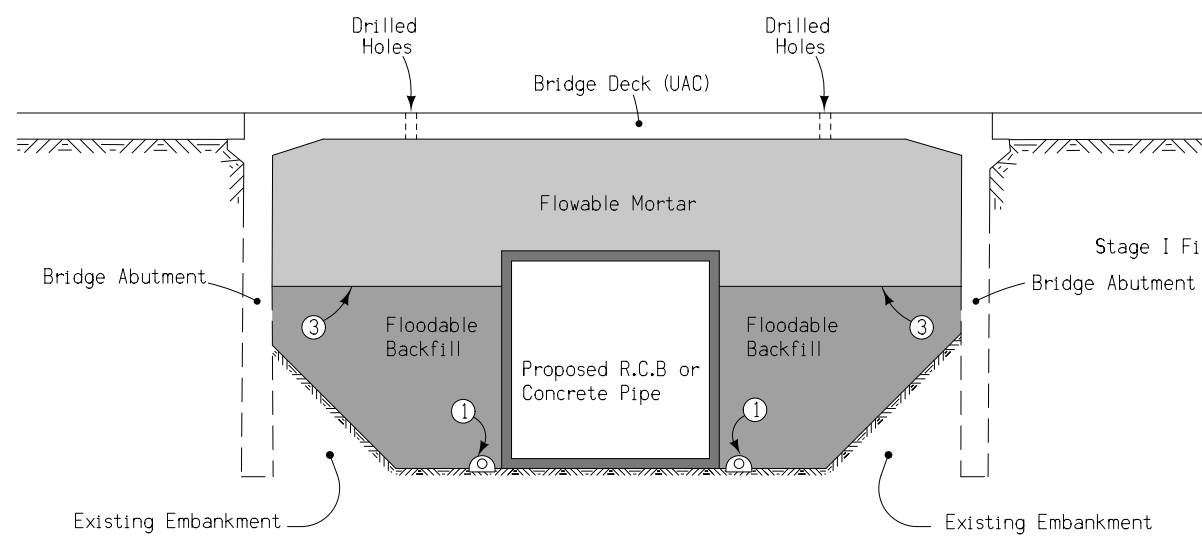
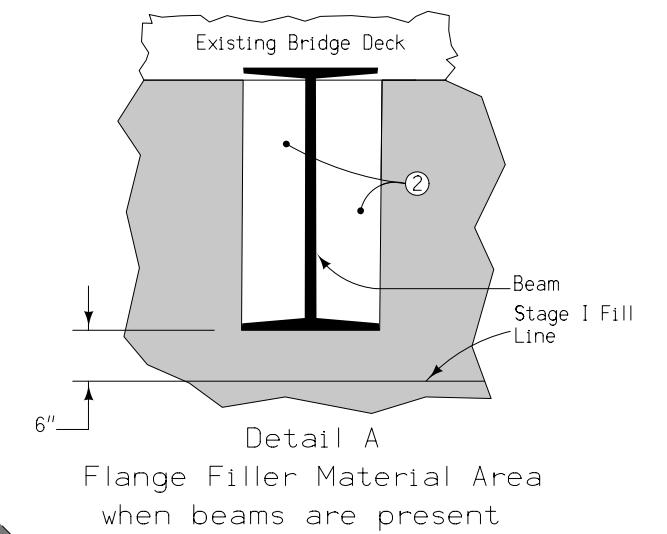
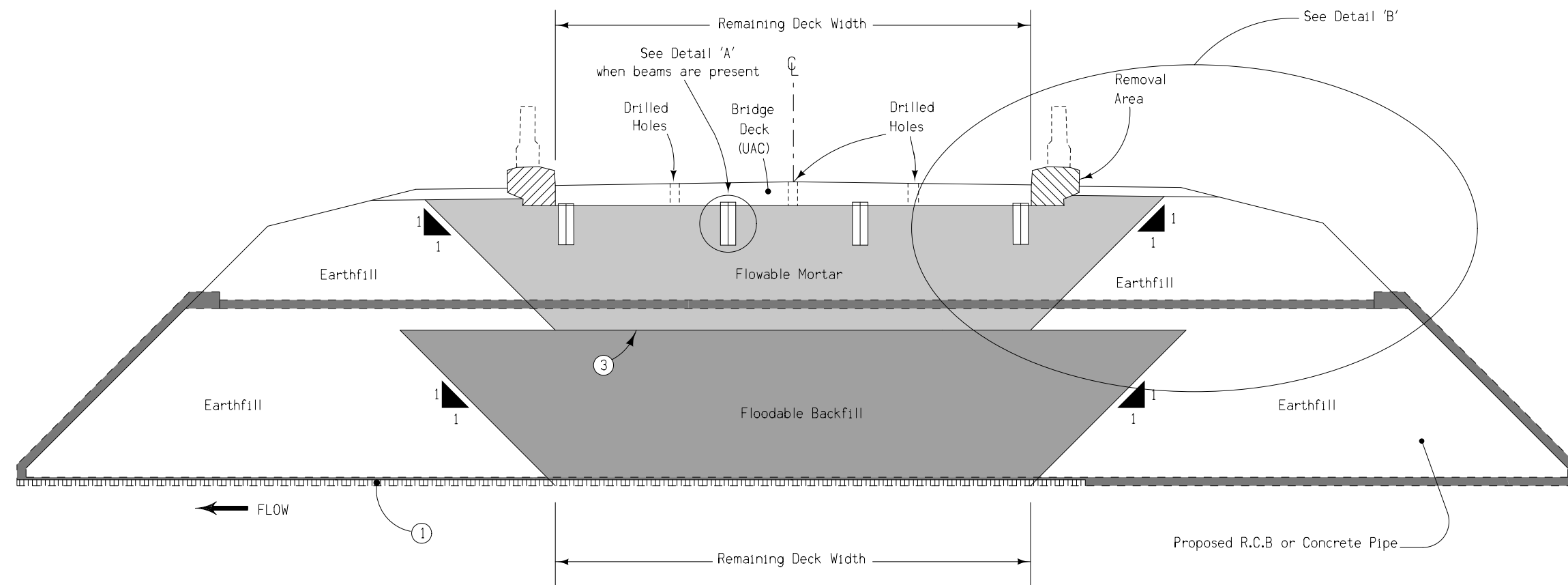


Granular Shoulder

STATION TO STATION		Ⓞ Feet
979+79.06	981+67.50	2

See Tab 112-9 for shoulder quantities.

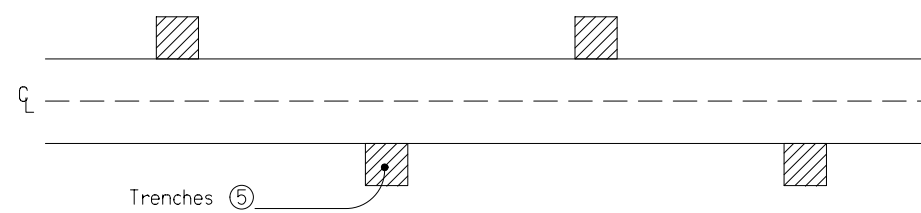
IOWA HIGHWAY 175



Section along Centerline

Detail B (Beam Bridge)

Detail B (Slab Bridge)

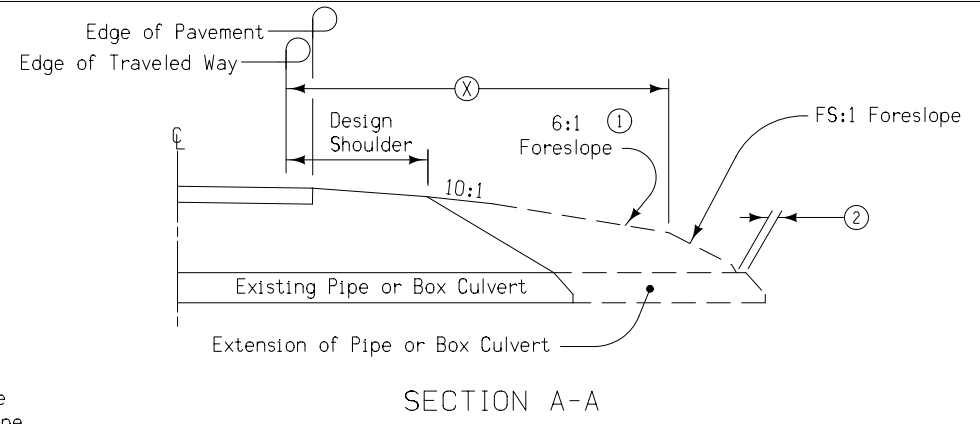
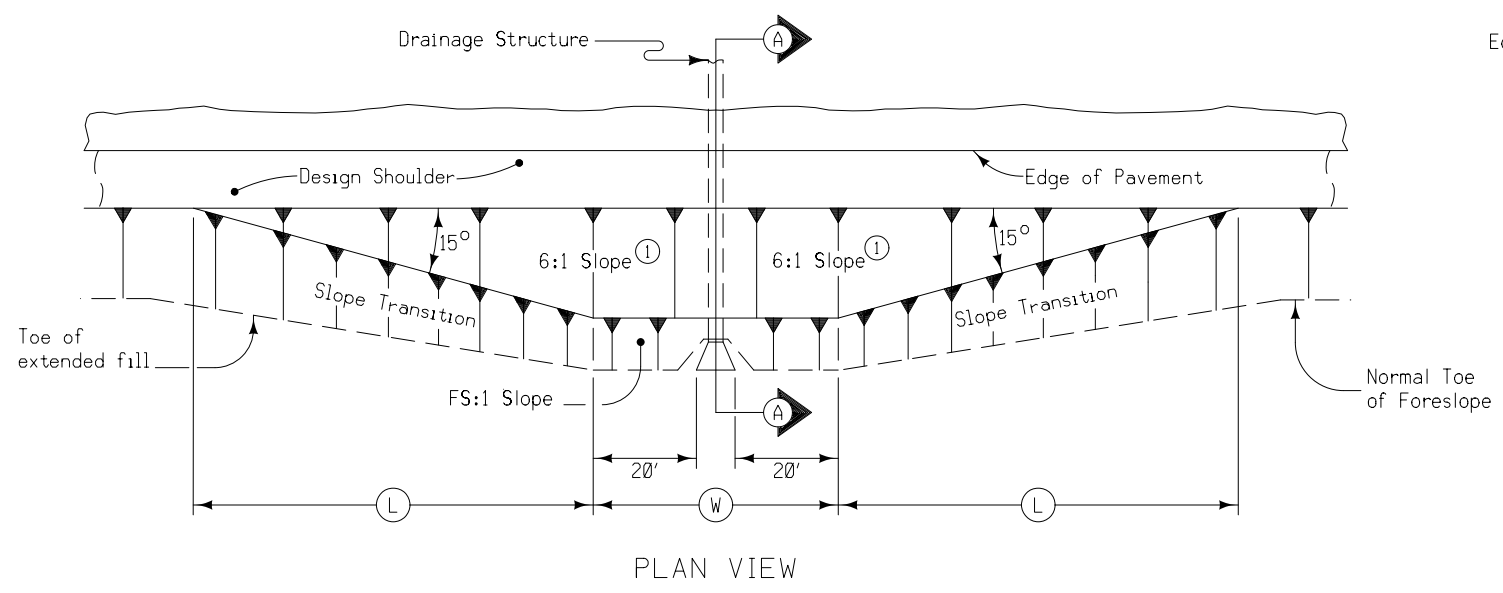


Trench Layout

- ① 4" Subdrain at flowline elevation of culvert with 4" cover of porous backfill.
- ② Place Flange Filler Material to fill pocket area between flanges to prevent flowable mortar from building up. Flange Filler Material is incidental to flowable mortar.
- ③ Fill void with the maximum amount of Floodable Backfill possible. Distance from Floodable Backfill to bridge beams (when present) or bridge deck shall not exceed 5'.
- ④ Cut trenches in the soil plug to provide drainage for the flowable mortar. Backfill the trenches with open graded crushed stone, gravel, or recycled PCC to allow water to drain. Backfill material is incidental to flowable mortar.
- ⑤ Place trenches at 20' spacing with a minimum of two trenches on each side of the roadway.

FILL FOR CULVERT USED IN BRIDGE REPLACEMENTS

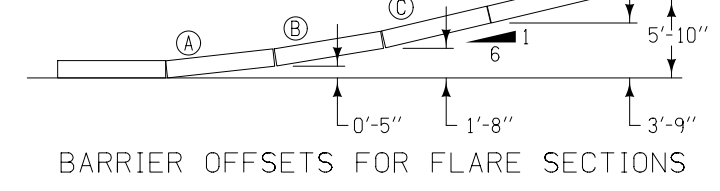
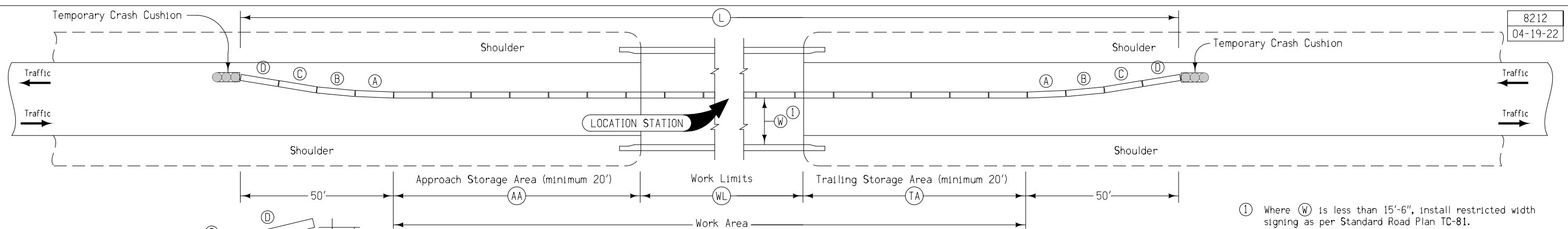
Denotes pay limits for flowable mortar
Denotes pay limits for flooded backfill



- Notes:
- ① At locations where an extended or newly constructed drainage structure extends beyond the normal foreslope cover, flatten the foreslope as indicated so as to cover the structure. Minimum earth cover is 6".
 - ① Slope may be flatter than 6:1.
 - ② 6" Minimum for pipe installations or to top of headwall on R.C.B.
 - Ⓜ = Pipe or R.C.B. opening width plus 20 feet each side.

STRUCTURE LOCATION		Ⓜ	Ⓛ	Ⓧ	ⓕⓈ
STATION	SIDE	Feet	Feet	Feet	
980+73.40	Both	44.10	67.17	22	16

BARNROOF FORESLOPE AT DRAINAGE STRUCTURE



Station	Side	ⓂⓂ	ⓂⓁ	Ⓜⓐ	Ⓜ	Anchored X	Ⓜ	Remarks
		Feet	Feet	Feet	Feet		Ft-Inches	
980+73.19	Both	20	34.5	20	144.5		13'-6"	

① Where Ⓜ is less than 15'-6", install restricted width signing as per Standard Road Plan TC-81.

TEMPORARY CONCRETE BARRIER LAYOUT for Two-Way Traffic

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

UTILITY LEGEND

- PPA, Midland Power Cooperative
- WL1D, Xenia Rural Water District - Quality D

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Lavender	(9)		Temporary Pavement Shading
Yellow	(4)		Proposed Pavement Shading
Orange	(6)		Proposed Granular Shading
Orange	(70)		Proposed Shoulder Granular Shading
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Orange, Light	(134)		Proposed Granular Entrance Shading
Yellow	(220)		Proposed Paved Entrance Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading
Green, Light	(225)		Existing Pavement Shading
Red	(3)		Proposed Structure Shading
Red	(3)		Delineates Restricted Areas

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

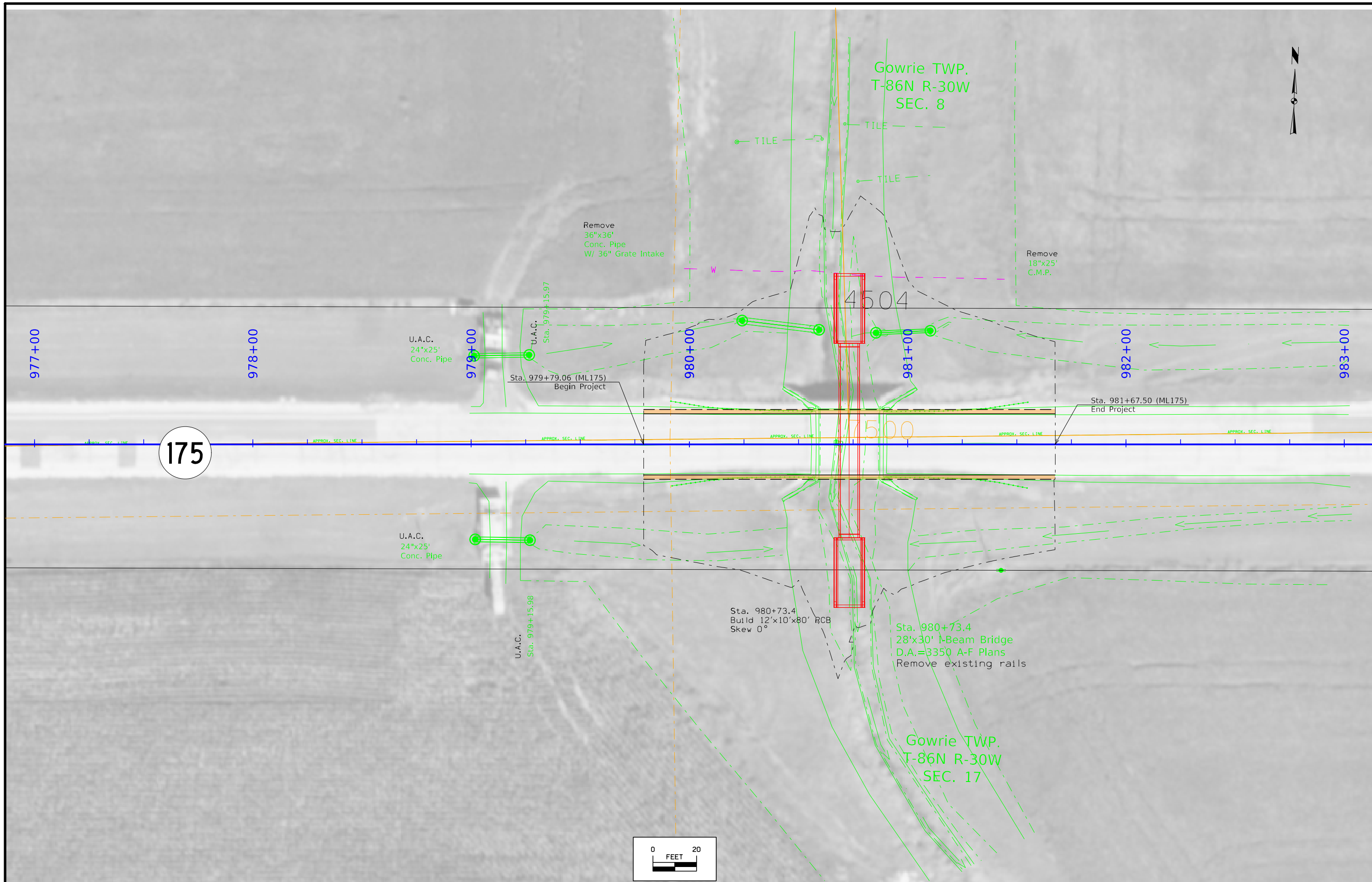
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

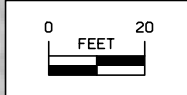
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

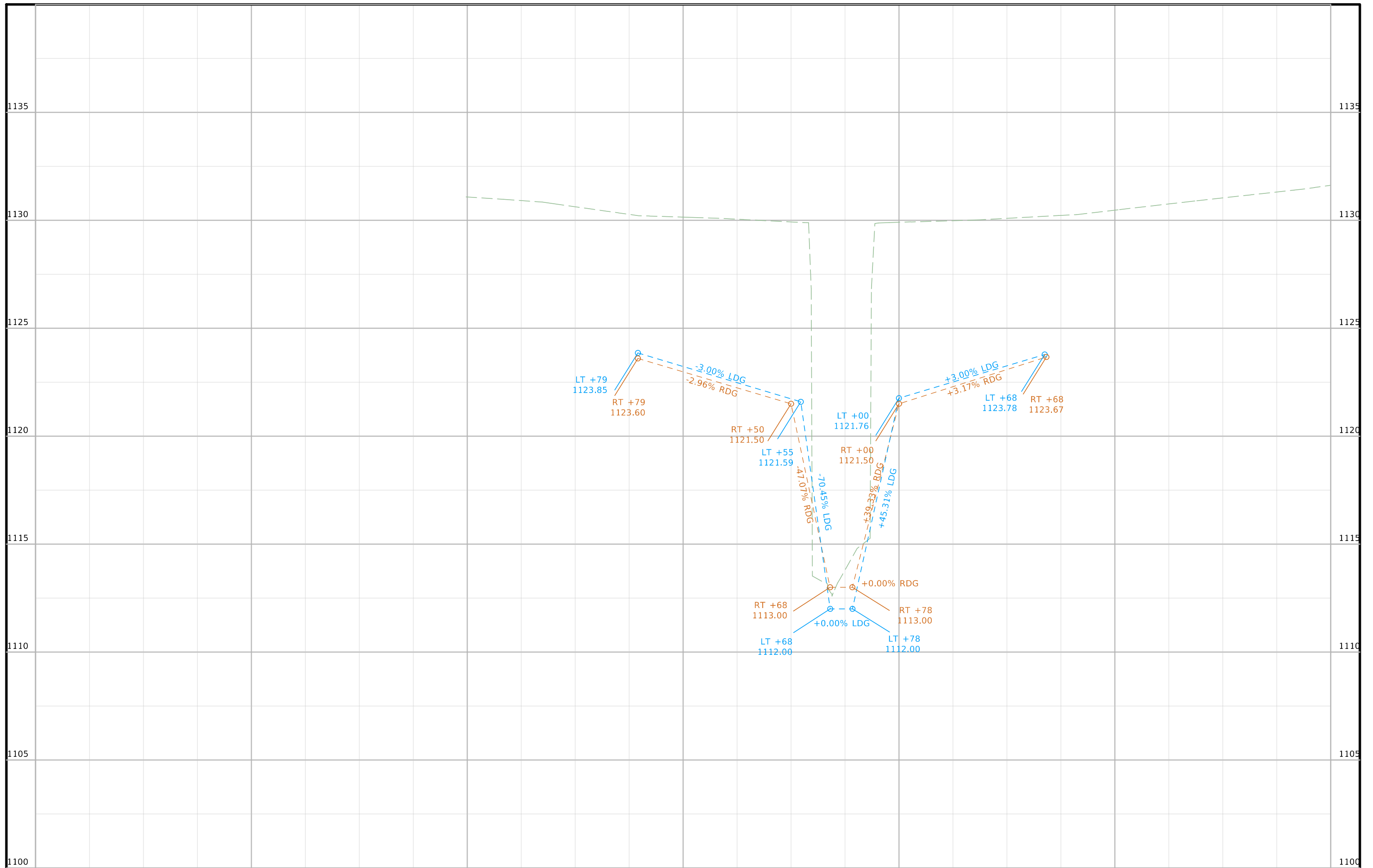
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)



175





108-23A 08-01-08	TRAFFIC CONTROL PLAN
Traffic on IA 175 shall be maintained at all times.	
One lane of traffic shall be maintained at all times via the use of TC-217 with TBR and Signals during the removal of bridge rail, guardrail, and flowable mortar.	

111-01 04-17-12	COORDINATED OPERATIONS
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.	
Project	Type of Work
None provided	

108-25 10-21-14	511 TRAVEL RESTRICTIONS
--------------------	--------------------------------

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 175	E/W	Webster	Project Limits		Temporary Signal		Vertical	N/A	15'-00"	N/A	N/A	

CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature	Design Color No.	Feature
Aggregate			
(64)	Choke Stone	(112)	Noise Wall
(42)	Engineering Fabric	(112)	Noise Wall Footing
(8)	Flooded Backfill	(112)	Retaining Wall Back
(92)	Macadam Stone	(112)	Retaining Wall Back Excavate
(20)	Modified	(112)	Retaining Wall Face
(12)	Plowing Shaping	(112)	Retaining Wall Front Excavate
(14)	Porous Backfill	(112)	Retaining Wall Front Footing
(8)	Revetment Class A	(112)	Retaining Wall MSE Gutter
(6)	Revetment Class B	(112)	Retaining Wall Reinforced Earth
(62)	Revetment Class C	Grading	
(188)	Revetment Class D	(8)	Behind Curb Cut
(28)	Revetment Class E	(6)	Granular
(12)	Shoulder Special Backfill	(13)	Granular Back Fill
(12)	Special Backfill	(48)	Rock Undercut
(20)	Subbase	(8)	Shoulder Earth Fill
(20)	Subbase Lower	(2)	Side Slopes
(20)	Subbase Upper	(226)	Side Slopes Dressing
(118)	Subgrade Treatment	Substrata	
Asphalt			
(207)	HMA Base Course	(128)	Boulder Substrata
(207)	HMA Interim Course	(48)	Broken Weathered Substrata
(207)	HMA Surface Course	(3)	Core Out Substrata
Concrete			
(0)	Barrier Concrete	(203)	Existing Pavement Substrata
(0)	Barrier Concrete Footing	(6)	Loam Substrata
(0)	Curb Gutter	(80)	Rock Substrata
(48)	Flowable Mortar	(4)	Select Sand Substrata
(0)	Median Concrete	(3)	Shale Substrata
(0)	PCC Pavement	(10)	Topsoil Substrata
(0)	Sidewalk	Unsuitable / Waste	
Shoulder			
(209)	Shoulder HMA	(3)	Unsuitable Type A
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(11)	Unsuitable Type C
(6)	Shoulder Granular	(3)	Waste
Existing			
(0)	Existing Pavement		

NOTES:

Text

NOTES:

Text

CROSS SECTIONS LEGEND AND INFORMATION SHEET

(COVERS SHEET SERIES W, X, Y, & Z)

