

# LAKE COUNTY DIVISION OF TRANSPORTATION PLANS FOR PROPOSED COUNTY HIGHWAY

## ROBERT McCLORY BIKE PATH OVER IL 173 & RUSSELL ROAD ABUTMENT REPAIRS SECTION 16-00173-14-BR LAKE COUNTY, ILLINOIS

### INDEX OF SHEETS

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- 2. SUMMARY OF QUANTITIES
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- 23 THRU 24 LCDOT STANDARDS AND DETAILS
- 25 THRU 48 IDOT HIGHWAY STANDARDS

### LCDOT STANDARD DETAILS

- LC4202 CONCRETE WASHOUT FACILITIES
- LC7004 TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS,  
INTERSECTIONS AND DRIVEWAYS
- LC7200 DIRECTION INDICATION BARRICADES

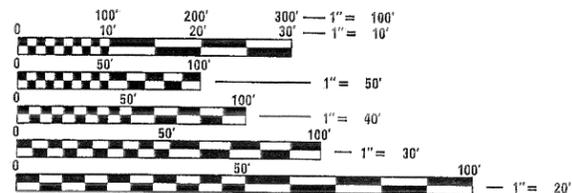
### IDOT HIGHWAY STANDARD

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS (8 SHEETS)
- 630001-10 STEEL PLATE BEAM GUARDRAIL (4 SHEETS)
- 631011-09 TRAFFIC BARRIER TERMINAL, TYPE 2
- 631046-04 TRAFFIC BARRIER TERMINAL, TYPE 10
- 701001-02 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
- 701006-05 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701501-06 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701901-03 TRAFFIC CONTROL DEVICES (3 SHEETS)
- 725001 OBJECT AND TERMINAL MARKERS
- 782006 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS (3 SHEETS)

### TRAFFIC DATA

RUSSELL ROAD  
2014 ADT: 6,450  
POSTED SPEED LIMIT: 45 MPH

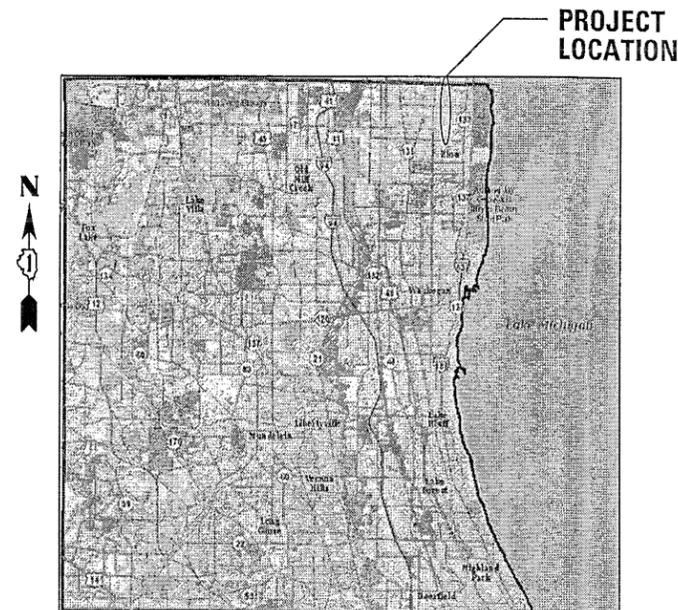
IL 173  
2014 ADT: 9,750  
POSTED SPEED LIMIT: 35 MPH



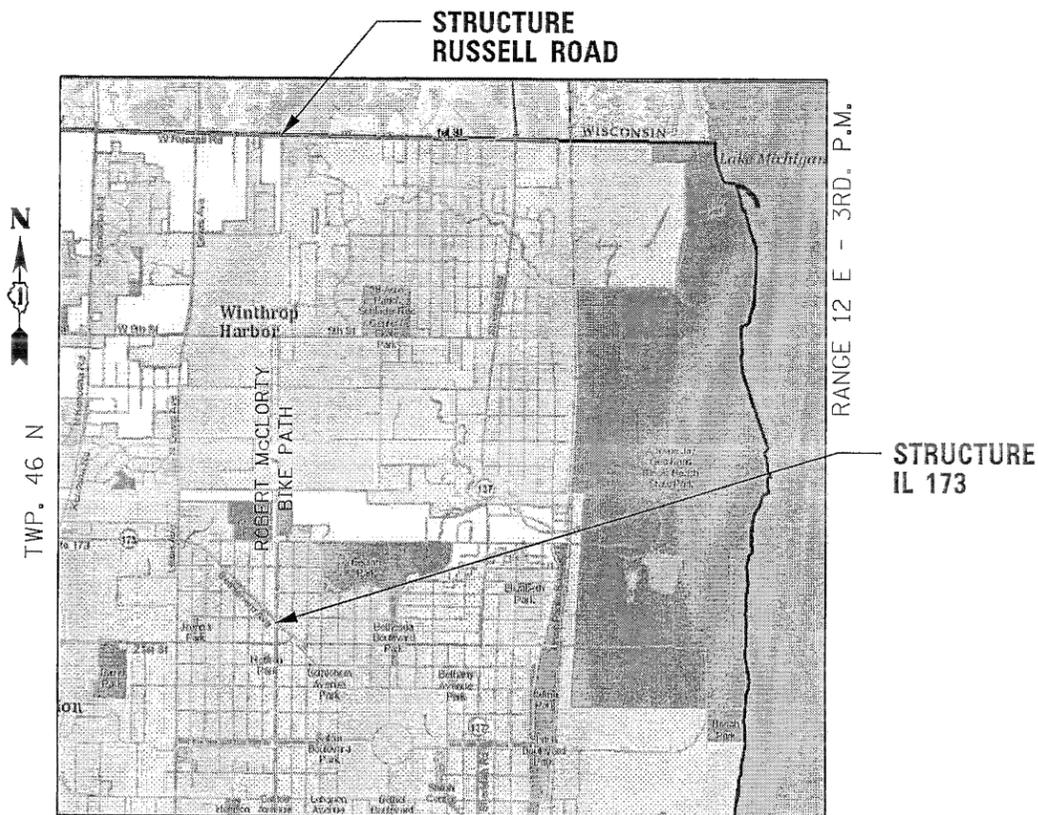
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

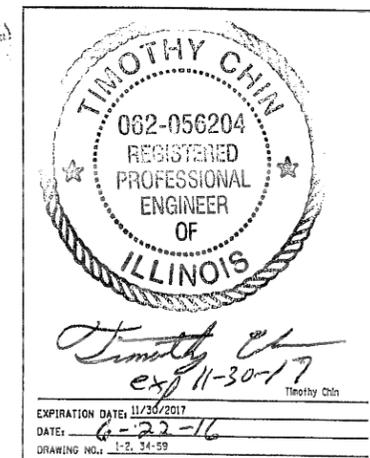
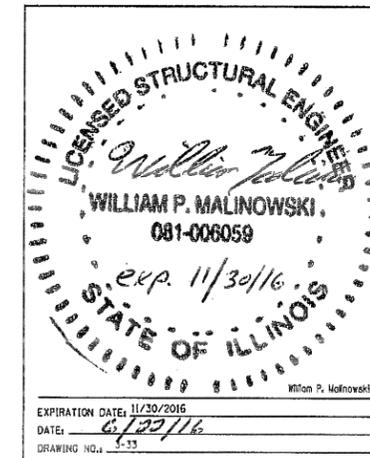
**TOWNSHIP: BENTON & ZION**  
**MUNICIPALITY: WINTHROP HARBOR & ZION**



LOCATION MAP



BENTON & ZION TOWNSHIPS  
MAP SCALE: NTS



Plans Prepared By: 8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030

Signature: *William P. Malinowski*  
Date: 6/22/2016  
Illinois License No.: 081-006059  
Expiration Date: 11/30/2016  
Field: STRUCTURAL ENGINEER  
Approved by: *P.J. Legg*  
Date: 6/23/16

REVISIONS / REMARKS		DATE	BY	PLLOT DATE:
NO.	DESCRIPTION	DATE	BY	PLLOT DATE:
		6/22/2016		CRS/TC
				PLOTTED BY: christopher.stanuch

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ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS  
COVER SHEET

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	1	48

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
• 20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	28
• 20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	36
• 21101600	TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH	SQ YD	18
• 21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	522
25000210	SEEDING, CLASS 2A	ACRE	0.1
25000312	SEEDING, CLASS 4A	ACRE	0.1
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	1
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	1
28100205	STONE RIPRAP, CLASS A3	TON	5
• 28200200	FILTER FABRIC	SQ YD	522
59000200	EPOXY CRACK INJECTION	FOOT	241
60255500	MANHOLES TO BE ADJUSTED	EACH	1
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	12.5
63000007	STEEL PLATE BEAM GUARDRAIL, TYPE B, 6 FOOT POSTS	FOOT	25
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
63100105	TRAFFIC BARRIER TERMINAL, TYPE 10	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	113
63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	225
70600235	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE), TEST LEVEL 2	EACH	2
• LC200501	MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS	UNIT	3,014

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
• LC600103	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (RADIAL)	EACH	2
• LC782000	GUARDRAIL REFLECTORS	EACH	12
• X0321865	ANTI-GRAFFITI PROTECTION SYSTEM	SQ FT	3,800
• X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	830
• X2511630	EROSION CONTROL BLANKET (SPECIAL)	SQ YD	540
• X2800500	INLET PROTECTION, SPECIAL	EACH	5
• X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1
• XX006337	ARCHITECTURAL FINISH FOR CONCRETE SURFACES	SQ FT	3,800
• XX006729	PERIMETER EROSION BARRIER, ROLLED EXCELSIOR	FOOT	218
• Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	2,436
• Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	241

• SPECIAL PROVISION

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		6/28/2016
		/ /		CRS/TC
		/ /		PLOTTED BY: jacob.nardulli


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**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**SUMMARY OF QUANTITIES**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	2	48

**GENERAL**

1. ALL CONSTRUCTION SHALL BE DONE ACCORDING TO THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED APRIL 1, 2016; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" JANUARY 2014 SEVENTH EDITION; THE DETAILS IN THESE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING WORK AND SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH THE ENGINEER.
3. THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH ANY ADJACENT PROJECTS THAT ARE OR MAY BE UNDER CONSTRUCTION.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. WHERE NEW WORK IS PROPOSED TO MEET EXISTING FEATURES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD CHECK ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
5. THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION, EXCEPT FOR BRIEF PERIODS OF INTERRUPTION. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER NO LESS THAN 24 HOURS IN ADVANCE OF THE INTERRUPTION OF ACCESS AND/OR SERVICES. THE NOTIFICATION WILL INCLUDE THE TIME AND DURATION OF THE INTERRUPTION. THE COST TO PROVIDE ACCESS SHALL BE PAID FOR AND INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).
6. ALL WORK SHALL BE COMPLETED WITHIN THE LIMITS OF THE PROJECT SHOWN. NO EQUIPMENT, MATERIALS OR A YARD OR FIELD OFFICE SHALL BE SET UP OR STORED ON COUNTY OR PRIVATE PROPERTY WITHOUT WRITTEN PERMISSION OF THE COUNTY OR THE PROPERTY OWNER.
7. THE ILLINOIS DEPARTMENT OF TRANSPORTATION IS NOT THE OWNER OF RECORD FOR THIS BRIDGE. THOSE SEEKING HISTORIC, AS-BUILT OR OTHER EXISTING DOCUMENTS AND OWNER OF RECORD PLANS MUST CONTACT THE COUNTY TO MAKE ARRANGEMENTS FOR ACCESS TO THIS INFORMATION.
8. THE CONTRACTOR SHALL KEEP THE ROADWAYS FREE FROM DEBRIS AND SEDIMENT.

**SURVEY**

1. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). THE ELEVATIONS SHOWN ON THE PLANS ARE FOR FINISHED GRADES UNLESS OTHERWISE NOTED.
2. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE THE MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

**REMOVAL**

1. ALL EXCESS MATERIAL SHALL BE DISPOSED OF OFFSITE ON THE DAY IT IS EXCAVATED OR REMOVED.
2. THE CONTRACTOR IS PROHIBITED FROM BURNING ANY MATERIAL WITHIN OR ADJACENT TO THE PROJECT LIMITS. ALL EXCESS OR WASTE MATERIAL SHALL BE HAULED AWAY FROM THE PROJECT SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF OUTSIDE THE RIGHT-OF-WAY. NO EXTRA COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR ANY EXPENSE INCURRED BY COMPLYING WITH THE REQUIREMENTS OF THIS NOTE.

3. ALL STORM SEWER, PIPE CULVERTS, GUARDRAIL AND OTHER ITEMS SCHEDULED FOR REMOVAL WILL BE EXAMINED BY THE ENGINEER, AND IN COORDINATION WITH LCDOT MAINTENANCE, TO DETERMINE IF THE ITEM IS SUITABLE FOR SALVAGE. ITEMS DESIGNATED FOR SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT THE LOCATION AND IN THE MANNER DESIGNATED BY ENGINEER. THE COST OF STORING SALVAGED ITEMS SHALL BE INCLUDED IN THE UNIT COST OF THE ITEM BEING REMOVED. SALVAGEABLE ITEMS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY AT THE CONTRACTOR'S EXPENSE WITH NEW MATERIAL OF THE SAME KIND.

**DRAINAGE**

1. THE COST OF CONNECTING EXISTING STORM SEWERS TO THE PROPOSED DRAINAGE SYSTEM SHALL BE INCLUDED IN THE UNIT COST OF THE PROPOSED DRAINAGE STRUCTURE. THE COST OF CONNECTING PROPOSED STORM SEWER TO EXISTING STRUCTURES SHALL BE INCLUDED IN THE UNIT COST OF THE PROPOSED STORM SEWER. ADDITIONAL PIPE REQUIRED TO COMPLETE THE CONNECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "STORM SEWER" OF THE TYPE, SIZE AND CLASS REQUIRED.
2. UNLESS OTHERWISE NOTED ON THE PLANS, THE EXISTING DRAINAGE FACILITIES SHALL REMAIN IN USE DURING THE PERIOD OF CONSTRUCTION. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING, OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER.

**DRAINAGE (CONTINUED)**

3. THE CONTRACTOR SHALL CONFIRM ALL EXISTING STORM SEWER PIPE SIZES AND INVERTS PRIOR TO ORDERING STRUCTURES. ANY MODIFICATION OF STRUCTURES DUE TO THE FAILURE OF THE CONTRACTOR TO PERFORM THIS TASK SHALL BE AT THE CONTRACTOR'S EXPENSE AND MAY LEAD TO THE REJECTION OF THE STRUCTURE IN THE FIELD IF THE MODIFICATION IS NOT APPROVED BY THE ENGINEER.

4. IF DURING CONSTRUCTION, THE CONTRACTOR ENCOUNTERS OR OTHERWISE BECOMES AWARE OF ANY SEWERS OR UNDERDRAINS WITHIN THE RIGHT-OF-WAY OTHER THAN THOSE SHOWN ON THE PLANS, HE/SHE SHALL INFORM THE ENGINEER, WHO SHALL DIRECT THE WORK NECESSARY TO MAINTAIN OR REPLACE THE FACILITIES IN SERVICE AND TO PROTECT THEM FROM DAMAGE DURING CONSTRUCTION IF MAINTAINED. EXISTING FACILITIES TO BE MAINTAINED THAT ARE DAMAGED BECAUSE OF NON-COMPLIANCE WITH THIS PROVISION SHALL BE REPLACED AT THE CONTRACTOR'S OWN EXPENSE. SHOULD THE ENGINEER DIRECT THE REPLACEMENT OF A FACILITY, THE NECESSARY WORK AND PAYMENT SHALL BE ACCORDING TO SECTIONS 550 AND 601, AND ARTICLE 104.02 OF THE "STANDARD SPECIFICATIONS".

5. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, CULVERTS, SEWERS OR CATCH BASINS. THE CONTRACTOR SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET. THE CONTRACTOR SHALL BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH SEWER ARE BUILT AND IN SERVICE. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE STORM SEWERS AND DRAINAGE STRUCTURES INSTALLED AS PART OF THIS PROJECT.

6. DURING THE CONSTRUCTION OPERATION WHEN ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS OR DRAINAGE STRUCTURES SO THE NATURAL FLOW OF WATER IS OBSTRUCTED, THE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY.

AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS ALL DRAINAGE STRUCTURES SHALL BE FREE FROM ALL DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE UNIT COSTS OF MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS.

7. TOP OF FRAME (RIM) ELEVATIONS SHOWN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL NEW STRUCTURES SHALL BE ADJUSTED TO THE FINAL ELEVATIONS OF THE AREAS IN WHICH THEY ARE LOCATED AS PART OF THE STRUCTURE COST. ANY PLATING OF THE STRUCTURE REQUIRED FOR STAGED CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE STRUCTURE.
8. COUPLINGS USED FOR CONNECTIONS OF NEW PIPE TO EXISTING PIPE AND WHERE DISSIMILAR PIPE AND JOINT MATERIALS ARE ENCOUNTERED SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. NO STAINLESS STEEL SHEAR RINGS WILL BE ALLOWED. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE STORM SEWER BEING INSTALLED.
9. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.

**LANDSCAPING**

1. PHOSPHORUS FERTILIZER NUTRIENT SHALL NOT BE USED ON LAKE COUNTY HIGHWAYS.

**SIGNS**

1. THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE SIGNS WHICH INTERFERE WITH HIS/HER CONSTRUCTION OPERATIONS, AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS ACCORDING TO ARTICLE 107.25 OF THE "STANDARD SPECIFICATIONS".

ALL UNUSED SIGNS SHALL BE RETURNED TO THE COUNTY.

LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS.

**UTILITIES**

1. LOCATION INFORMATION FOR UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS AND/OR INCLUDED IN THE CONTRACT SPECIFICATIONS REPRESENTS THE BEST INFORMATION PROVIDED TO LCDOT, AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE CONTRACTOR. LCDOT ASSUMES NO RESPONSIBILITY FOR THE SUFFICIENCY OR THE ACCURACY OF THE LOCATION INFORMATION PROVIDED.
2. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, GAS, WATER, SEWER, CABLE, ETC..., UTILITY LINES (MINIMUM 48 HOURS NOTIFICATION IS REQUIRED).

**UTILITIES (CONTINUED)**

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR DESTRUCTION OF PUBLIC OR PRIVATE PROPERTY ACCORDING TO THE SPECIAL PROVISIONS AND ARTICLE 107.20 OF THE "STANDARD SPECIFICATIONS". THE CONTRACTOR SHALL RESTORE SUCH PROPERTY AT HIS/HER OWN EXPENSE. THE CONTRACTOR SHALL USE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES REQUIRED TO MAINTAIN EXISTING UTILITIES, SEWERS, AND APPURTENANCES THAT MUST BE KEPT IN OPERATION. IN PARTICULAR, THE CONTRACTOR WILL TAKE ADEQUATE MEASURES TO PREVENT THE UNDERMINING OF UTILITIES AND SEWERS WHICH ARE STILL IN SERVICE.

**MISCELLANEOUS**

1. THE CONTRACTOR SHALL PROVIDE TEMPORARY TOILET FACILITIES FOR THE USE OF ALL THE CONTRACTORS' PERSONNEL EMPLOYED ON THE WORK SITE, AND SHALL MAINTAIN SAME IN PROPER SANITARY CONDITION. THE TEMPORARY FACILITIES SHALL INCLUDE HAND SANITIZING STATIONS. AT THE COMPLETION OF THE PROJECT, THE FACILITIES SHALL BE REMOVED AND THE PREMISES LEFT CLEAN. THE ENGINEER SHALL APPROVE THE LOCATION OF THE TEMPORARY TOILETS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

2. GENERALLY 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN ON THE PLANS. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.

3. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT SOME QUANTITIES ARE GIVEN IN BOTH SUMMARY FORM AND ON THE PLAN SHEETS. CARE SHOULD BE TAKEN TO AVOID DUPLICATION OF QUANTITIES.

**TRAFFIC CONTROL AND PROTECTION**

1. APPLICABLE STANDARDS

IDOT STANDARDS: 701001-02, 701006-05, 701501-06, 701901-03  
LCDOT STANDARDS: LC7004, LC7200

2. NO WORK SHALL BEGIN UNTIL THE TRAFFIC CONTROL MEASURES ARE IN PLACE. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE TRAFFIC PROTECTION BY THE APPLICATION OF TRAFFIC CONTROL DEVICES ACCORDING TO THE "STANDARD SPECIFICATIONS" AND AS SHOWN ON THE PLANS.
3. THE PERMANENT TRAFFIC CONTROL SHOWN ON THE PLANS IS THE MINIMUM REQUIREMENT. ADDITIONAL TRAFFIC CONTROL DEVICES AS SPECIFIED BY THE ABOVE HIGHWAY STANDARDS AND THE SPECIAL PROVISIONS SHALL BE PLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. ALL TRAFFIC CONTROL DEVICES SHALL BE CONSIDERED INCLUDED IN THE LUMP SUM PAY ITEM TRAFFIC CONTROL AND PROTECTION (SPECIAL) UNLESS OTHERWISE SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS.
4. ALL TRAFFIC CONTROL WARNING SIGNS AND ASSOCIATED SIGNING MOUNTED WITH THE WARNING SIGNS SHALL HAVE BLACK LEGENDS AND BORDERS ON FLUORESCENT ORANGE REFLECTIVE SHEETING.
5. ALL CONSTRUCTION SIGNS, BARRICADES AND OTHER DEVICES REQUIRED TO CONTROL TRAFFIC SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CONTRACTOR.  
  
THE CONTRACTOR SHALL FURNISH AND INSTALL TWO WEIGHTED SAND BAGS ON EACH TYPE II BARRICADE.  
  
THE CONTRACTOR SHALL FURNISH AND INSTALL A MINIMUM OF FOUR WEIGHTED SAND BAGS ON EACH TYPE III BARRICADE.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC IMMEDIATELY WHEN THEY ARE NO LONGER NECESSARY. WHEN A SIGN IS COVERED, ITS POST SHALL HAVE A REFLECTIVE 3 INCH X 6 INCH DELINEATOR INSTALLED.

7. THE SIGN SPACING FOR THE ABOVE HIGHWAY STANDARDS SHALL BE ACCORDING TO THE SIGN SPACING TABLE SHOWN ON THIS TRAFFIC CONTROL PLAN.

8. ROAD NAME PLATES SHALL BE INSTALLED ON THE "ROAD WORK AHEAD" SIGNS AT THE INTERSECTIONS SHOWN ON THIS TRAFFIC CONTROL PLAN. THE ROAD NAME PLATES SHALL BE 9 INCH BLANKS WITH 6 INCH UPPERCASE AND 5 INCH LOWERCASE LETTERING. THE ROAD NAME PLATES SHALL BE FURNISHED BY THE CONTRACTOR.

9. "ROAD WORK AHEAD" SIGNS SHALL BE EQUIPPED WITH MONO-DIRECTIONAL TYPE A AMBER FLASHING LIGHTS.

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE:
		/ /		6/23/2016
		/ /		CRS/TC
		/ /		PLOTTED BY: christopher.stanuch

amec  
foster  
wheeler  
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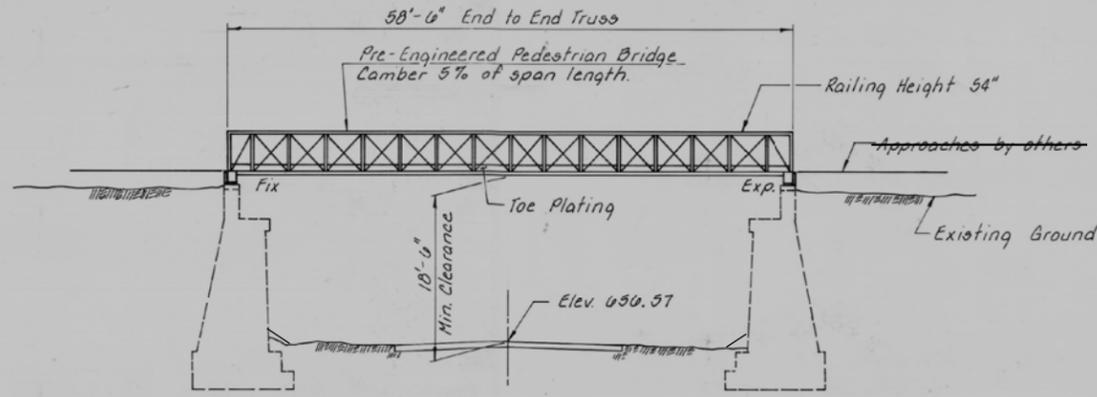


**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**

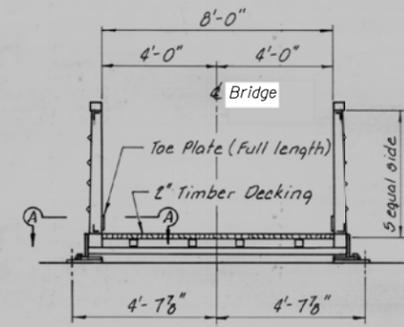
**GENERAL NOTES**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	3	48

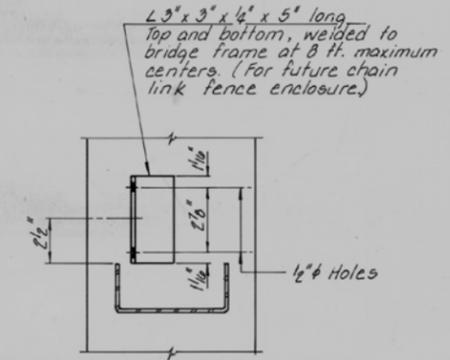
B.M. - 40d nail in Power Pole  
35' Rt. Sta. 154 + 80  
Elevation 659.32



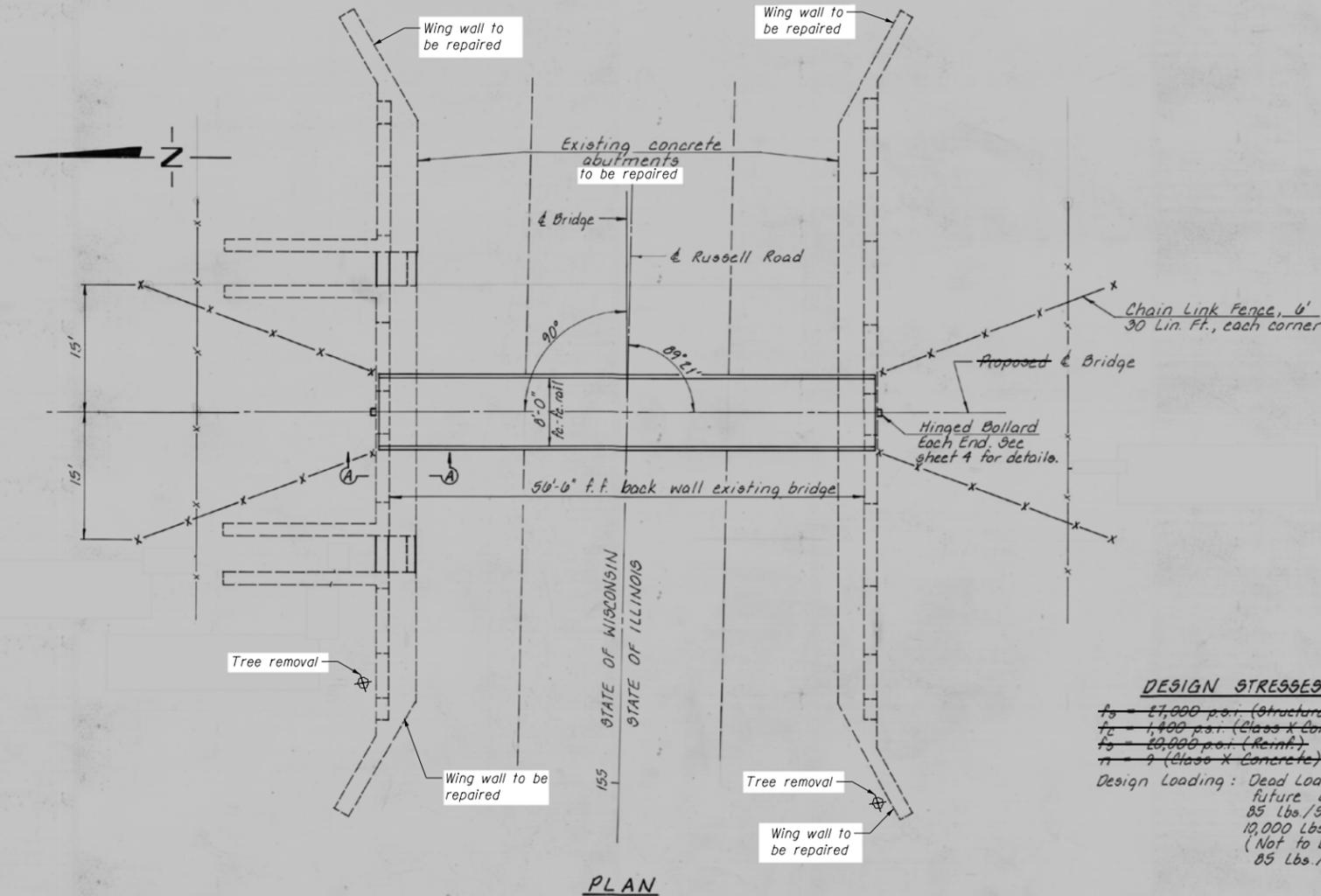
ELEVATION



SECTION THRU BRIDGE



SECTION A-A



PLAN

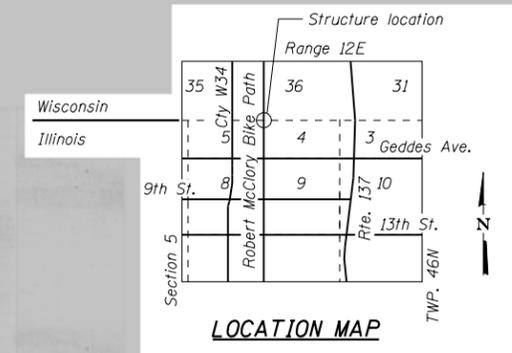
GENERAL NOTES

Anchor bolts used for the abutment bridge bearings shall be hot dipped galvanized.  
Reinforcement bars shall conform to the requirements of A 31, A 41E or A 53 Grade 60.  
Plan dimensions and details relative to the existing concrete abutments have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

DESIGN STRESSES

- $f_s = 27,000$  p.s.i. (Structural)
- $f_c = 4,400$  p.s.i. (Class X Concrete)
- $f_y = 20,000$  p.s.i. (Reinf.)
- $n = 9$  (Class X Concrete)

Design Loading: Dead Load: 290 Lbs./Ft. (includes allowance for future chain link fence enclosure.)  
85 Lbs./9q. Ft. Live Load uniform.  
10,000 Lbs. Live Load concentrated.  
(Not to be used simultaneously with 85 Lbs./9q. Ft. uniform Live Load)



LOCATION MAP

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
				6/23/2016

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ROBERT MCCLORY BIKE PATH OVER RUSSELL RD.  
GENERAL PLAN AND ELEVATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	4	48

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
* Tree Removal (6 to 15 Units Diameter)	Unit	18
Stone Riprap, Class A3	Ton	5
Epoxy Crack Injection	Foot	177
Traffic Barrier Terminal, Type 2	Each	1
Guardrail Removal	Foot	38
Remove and Reerect Steel Plate Beam Guardrail, Type A	Foot	225
Impact Attenuators, Temporary (Fully Redirective), Test Level 2	Each	2
* Traffic Barrier Terminal, Type 1, Special (Radial)	Each	1
* Guardrail Reflectors	Each	9
* Anti-Graffiti Protection System	Sq Ft	2,850
* Architectural Finish for Concrete Surfaces	Sq Ft	2,850
* Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq Ft	1,394
* Structural Repair of Concrete (Depth Greater than 5 inches)	Sq Ft	195

\* Special Provision

**GENERAL NOTES**

- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system at the contractor's expense.
- Contractor shall not scale dimensions from the contract plans for construction purposes. Scales shown are for information only.
- It shall be the contractor's responsibility to verify the location of all utilities prior to starting construction. contact J.U.L.I.E., 800-892-0123.
- The contractor shall use care when excavating around existing foundations. any damage to the existing structure and/or supporting foundation shall be repaired or replaced at the contractor's expense.
- Whenever any material is deposited into a drainage system or drainage structures, the deposited material shall be removed at the close of each working day. At the conclusion of construction operations, all drainage systems and structures shall be free from dirt and debris deposited during the various construction operations.
- No welding of reinforcement bars shall be performed.
- Only those trees designated by the engineer shall be removed. The contractor shall protect all remaining trees from damage due to his operations.
- The As-Built bridge plans have been included within this set for information only. The Contractor shall field verify existing dimensions and details affecting construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Heavy construction equipment shall be prohibited on the pedestrian bridge.

**INDEX OF SHEETS - ROBERT MCCLORY BIKE PATH OVER RUSSELL RD.**

4	General Plan and Elevation
5	Index of Sheets, Notes and Total BOM
6	Pedestrian Bridge Abutments - For Information Only
7	North Abut & Bollard Details - For Information Only
8	Abutment Repair
9	Maintenance of Traffic - Stage 1
10	Maintenance of Traffic - Stage 2

**SEQUENCE OF CONSTRUCTION**

- The contractor shall coordinate construction activities with Lake County Division of Transportation. The contractor shall contact the engineer at least 72 hours in advance of beginning work.
- See sheets 9 and 10 for sequence of construction for stage 1 and stage 2 regarding maintenance of traffic and lane closures.
- Maintain two way traffic on the trail on the bridge. Pedestrians and bike riders shall be protected from work activities and debris.
- Perform structural repair of concrete to the abutments per plans.

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE:
		/ /		6/23/2016
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		/ /		PLOTTED BY: Jacob.nardulli

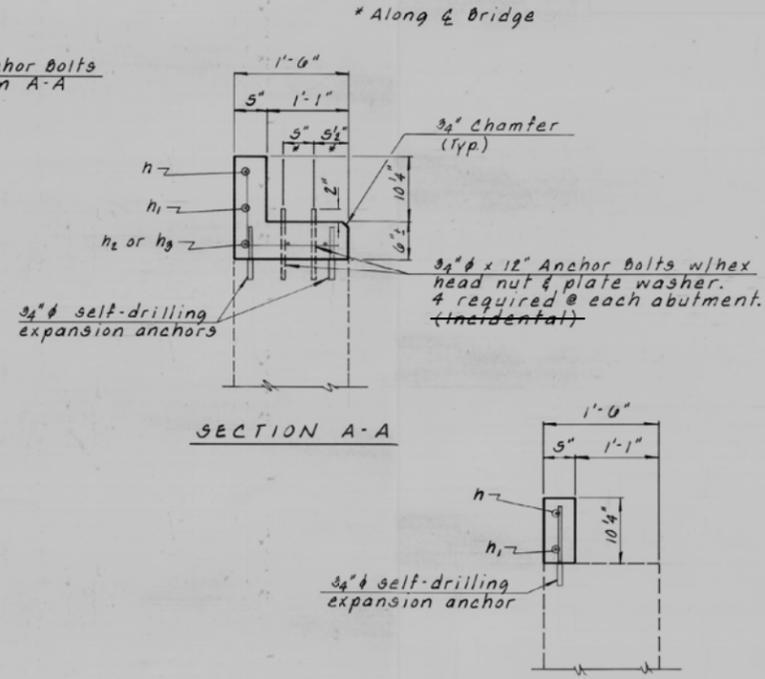
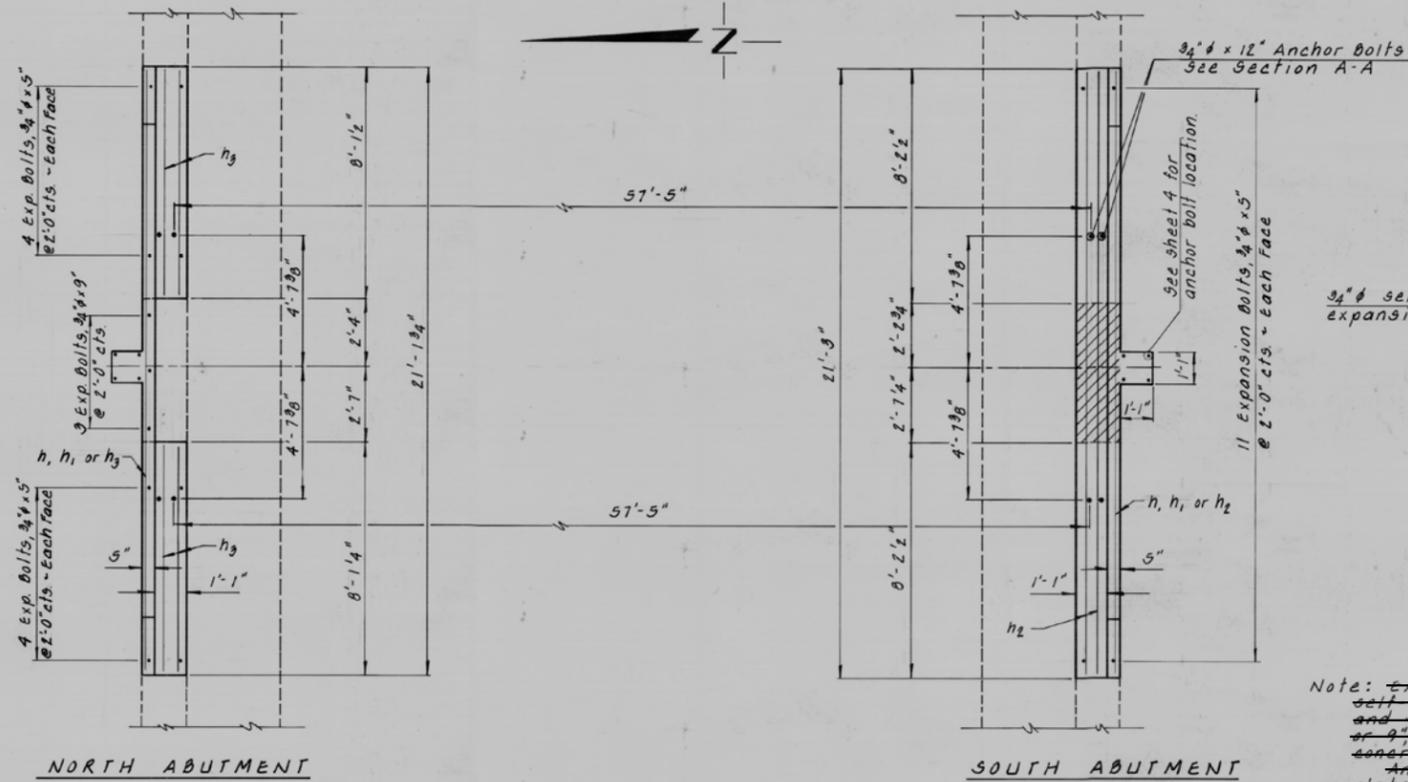

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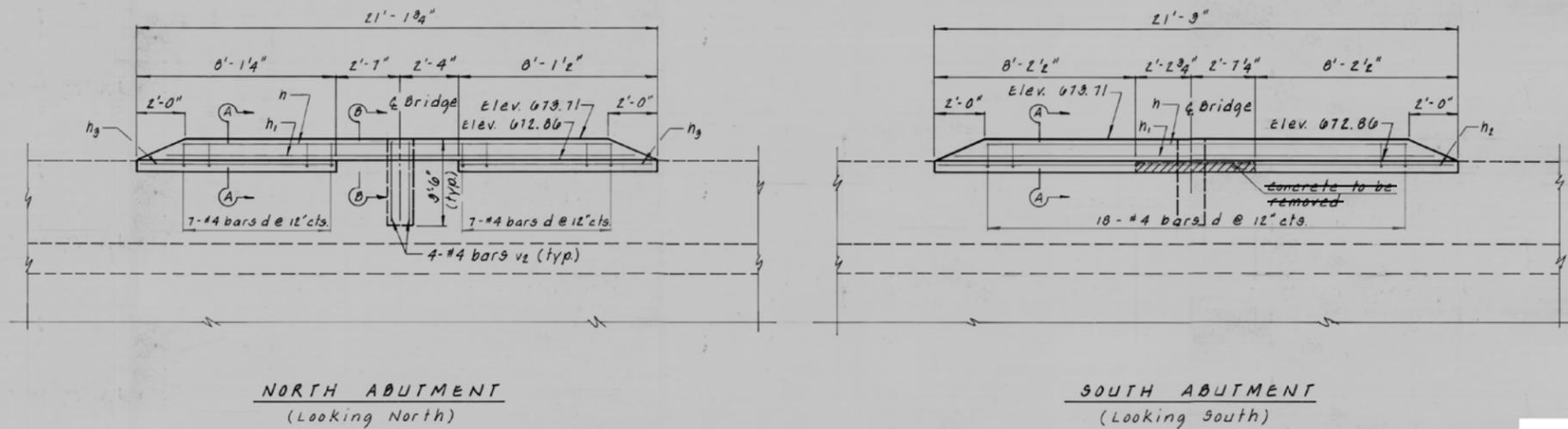
**ROBERT MCCLORY BIKE PATH OVER RUSSELL RD.**

**INDEX OF SHEETS, NOTES AND TOTAL BOM**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	5	48



Note: Expansion bolts shall consist of self-drilling expansion anchors and 3/4" bolts extending either 5" or 9" as indicated, into the new concrete.  
Anchor bolts, hex head nuts and plate washers for bridge and bollards shall be hot dipped galvanized. Cost of anchor bolts included in furnishing and erecting pre-engineered pedestrian bridge and bollards.



**FOR INFORMATION ONLY**

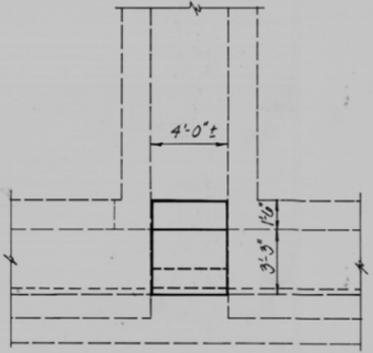
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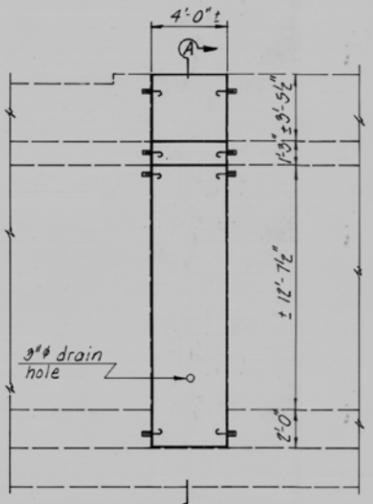


ROBERT McCLORY BIKE PATH OVER RUSSELL RD.  
PEDESTRIAN BRIDGE ABUTMENTS - FOR INFORMATION ONLY

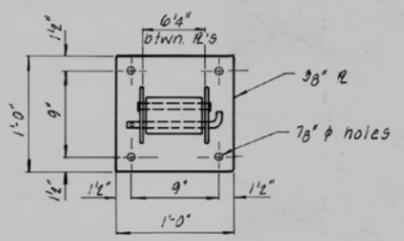
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--	173	16-00173-14-BR	6	48



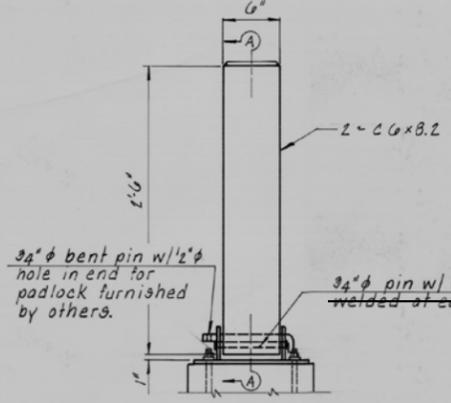
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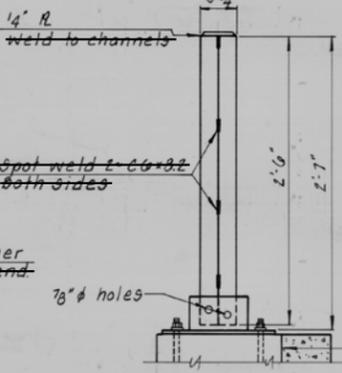
ELEVATION  
LOOKING NORTH



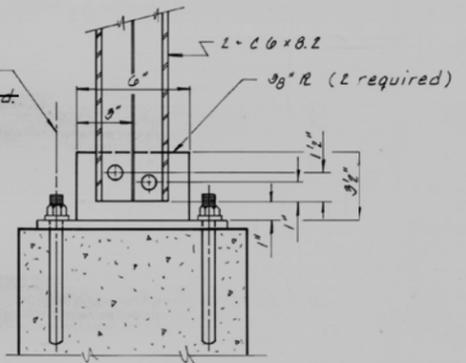
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ELEVATION

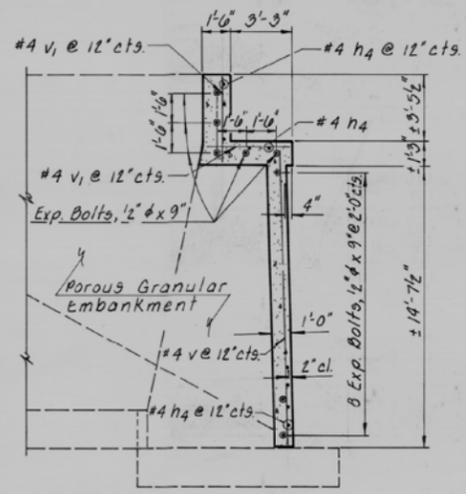


SIDE VIEW



SECTION A-A

DETAILS OF BOLLARD



SECTION A-A

Note: expansion bolts shall be self-drilling, or other approved anchors with hooked bolts extending 9" into the new concrete.

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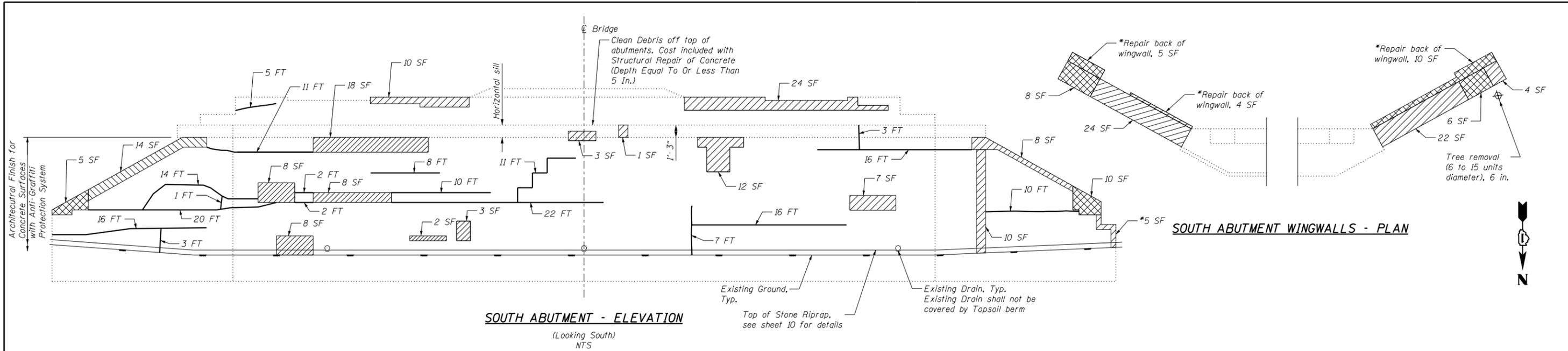
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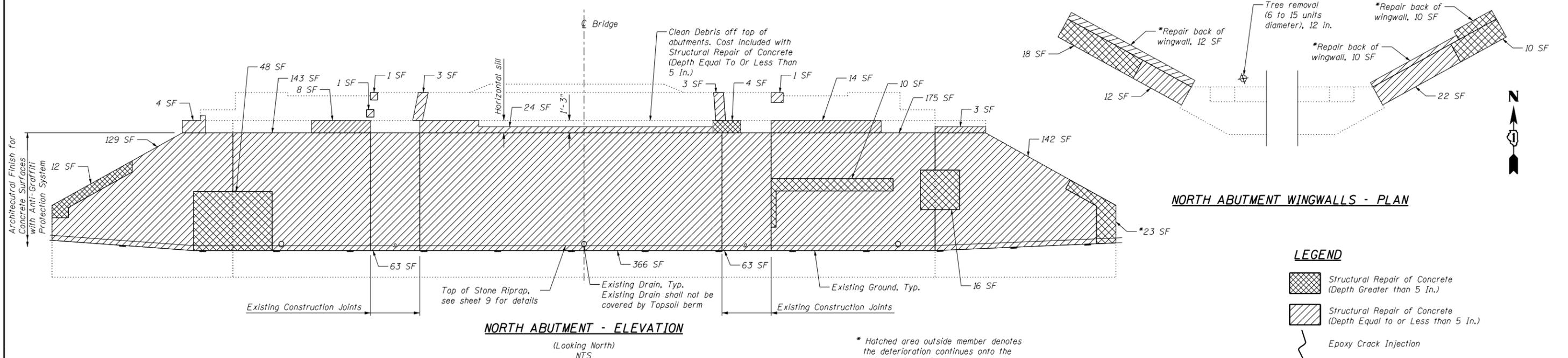
ROBERT McCLORY BIKE PATH OVER RUSSELL RD.  
NORTH ABUT & BOLLARD DETAILS - FOR INFORMATION ONLY

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	7	48



**SOUTH ABUTMENT - ELEVATION**

(Looking South)  
NTS



**NORTH ABUTMENT - ELEVATION**

(Looking North)  
NTS

**SOUTH ABUTMENT WINGWALLS - PLAN**

**NORTH ABUTMENT WINGWALLS - PLAN**

**LEGEND**

- Structural Repair of Concrete (Depth Greater than 5 In.)
- Structural Repair of Concrete (Depth Equal to or Less than 5 In.)
- Epoxy Crack Injection

\* Hatched area outside member denotes the deterioration continues onto the adjacent face of that member.

**Notes:**

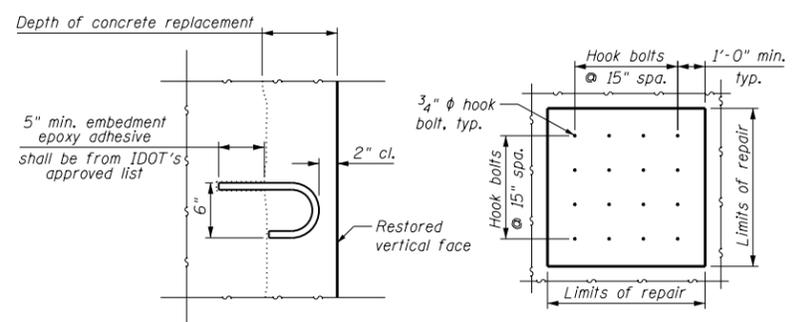
1. Remove all loose concrete on the face of the abutments and wingwalls.
2. Restore the South Abutment to its original dimensions.
3. Restore the horizontal sill, and all areas above the horizontal sill of the North Abutment to their original dimensions.
4. Below the horizontal sill at the North Abutment, remove additional concrete as necessary and build up areas where loose concrete was removed to provide an even, smooth surface in preparation of the Architectural Finish.
5. Hook bolts shall be installed where the depth of concrete replacement is greater than 8 inches and there is no existing reinforcement in the repair area. See Special Provisions. Cost of hook bolts shall be included in Structural Repair of Concrete (Depth Greater than 5 In.).
6. Where depth of concrete replacement is greater than 6 inches formed concrete repair shall be used.

**Notes (con't):**

7. Where depth of concrete replacement is less than 6 inches and the area of the repair is greater than 100 sq. ft. high performance shotcrete is recommended for repair with a final finish by a wood float to approximately match the existing concrete texture.
8. Repair area and exposed reinforcement shall be blast cleaned to provide an oil, dirt, and loose material free surface.
9. After the repair is completed, apply an architectural finish with anti-graffiti protection system on the traffic-facing walls as designated on the plan.
10. Clearing of the area around structures shall be performed according to Section 201 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction. No payment will be made for this work.

**BILL OF MATERIAL**

Description	Unit	Quantity
Tree Removal (6 to 15 units diameter)	Each	18
Epoxy Crack Injection	Foot	177
Anti-Graffiti Protection System	Sq Ft	2,850
Architectural Finish for Concrete Surfaces	Sq Ft	2,850
Structural Repair of Concrete (Depth Equal to or Less than 5 In.)	Sq Ft	1,394
Structural Repair of Concrete (Depth Greater than 5 In.)	Sq Ft	195



**HOOK BOLT REPAIR DETAIL**

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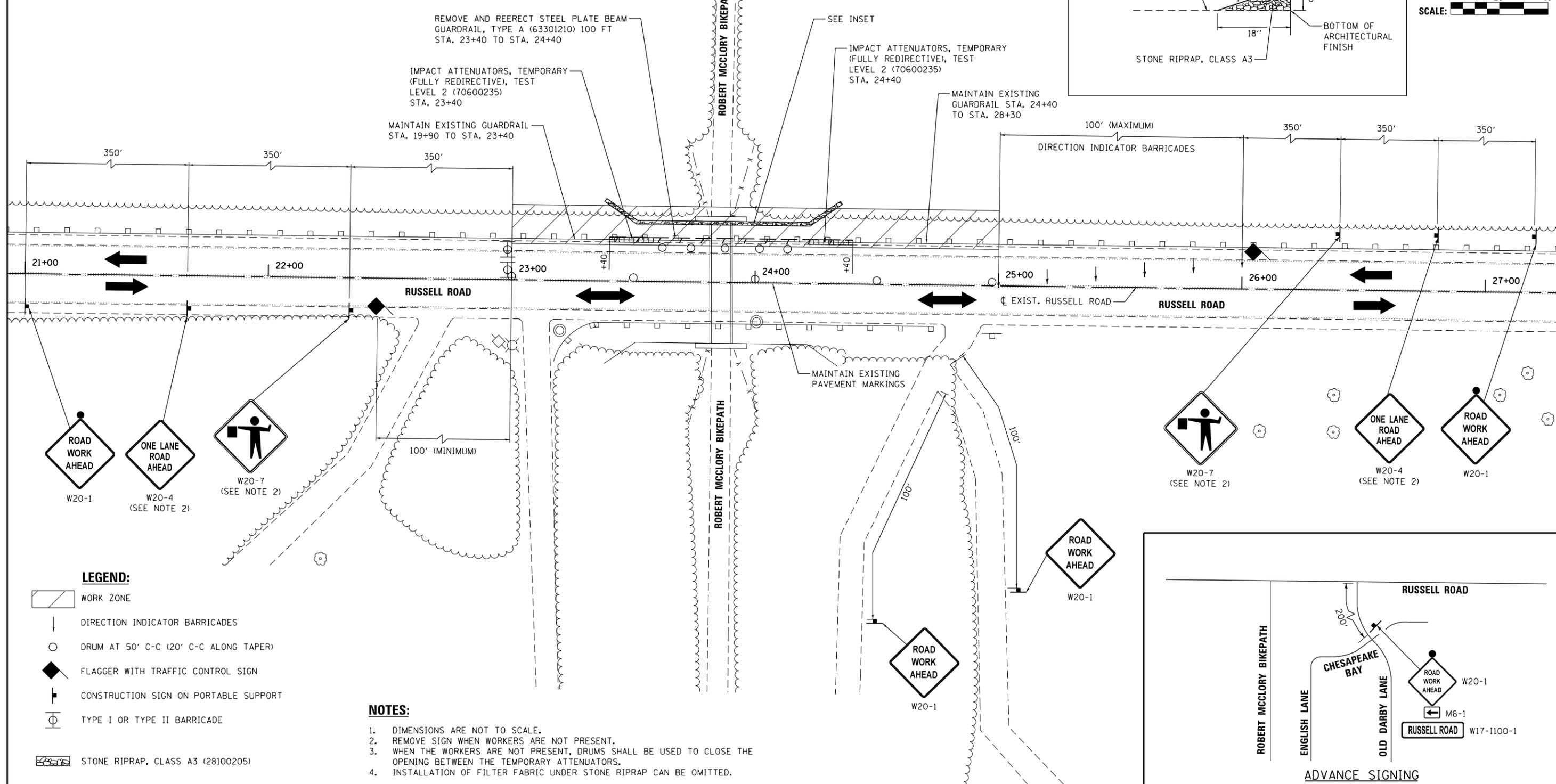
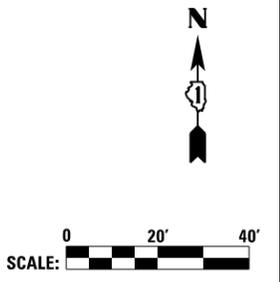
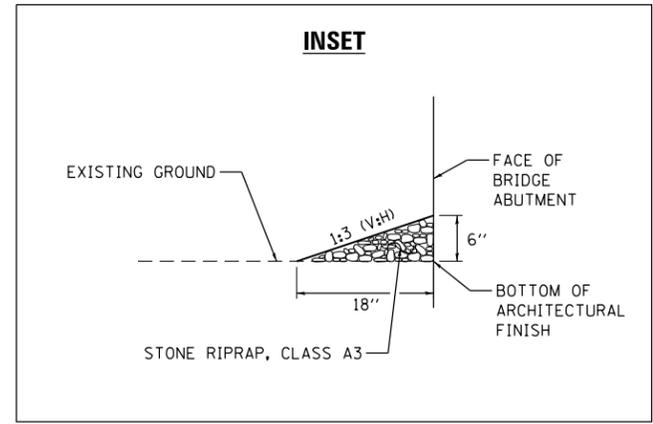


**ROBERT McCLORY BIKE PATH OVER RUSSELL RD.**  
**ABUTMENT REPAIR**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	8	48

**MAINTENANCE OF TRAFFIC/SEQUENCE OF CONSTRUCTION – STAGE 1**

1. INSTALL DAILY LANE CLOSURE PER PLANS DURING OFF-PEAK HOURS (8:00 A.M. TO 4:00 P.M. MONDAY THRU FRIDAY).
2. REMOVE EXISTING GUARDRAIL AND INSTALL TEMPORARY IMPACT ATTENUATORS PER PLAN.
3. MAKE REPAIRS TO NORTH BRIDGE ABUTMENT.
4. RE-ERECT EXISTING GUARDRAIL WITH NEW WOOD BLOCKOUTS PER PLAN.

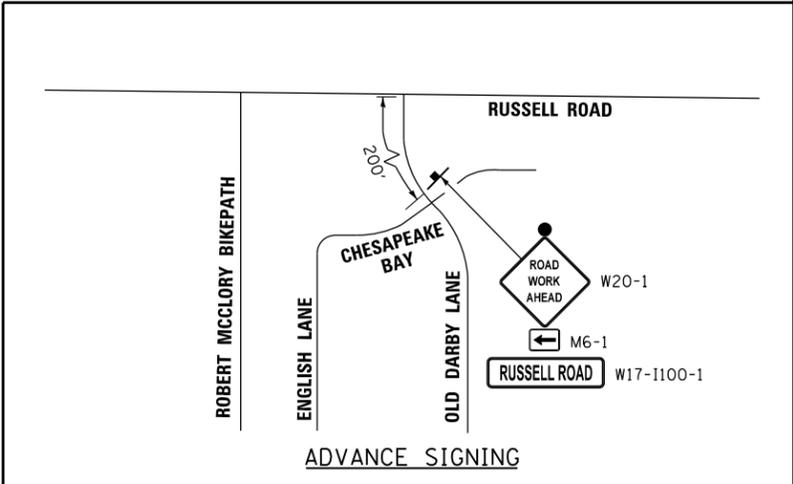


**LEGEND:**

- WORK ZONE
- DIRECTION INDICATOR BARRICADES
- DRUM AT 50' C-C (20' C-C ALONG TAPER)
- FLAGGER WITH TRAFFIC CONTROL SIGN
- CONSTRUCTION SIGN ON PORTABLE SUPPORT
- TYPE I OR TYPE II BARRICADE
- STONE RIPRAP, CLASS A3 (28100205)

**NOTES:**

1. DIMENSIONS ARE NOT TO SCALE.
2. REMOVE SIGN WHEN WORKERS ARE NOT PRESENT.
3. WHEN THE WORKERS ARE NOT PRESENT, DRUMS SHALL BE USED TO CLOSE THE OPENING BETWEEN THE TEMPORARY ATTENUATORS.
4. INSTALLATION OF FILTER FABRIC UNDER STONE RIPRAP CAN BE OMITTED.



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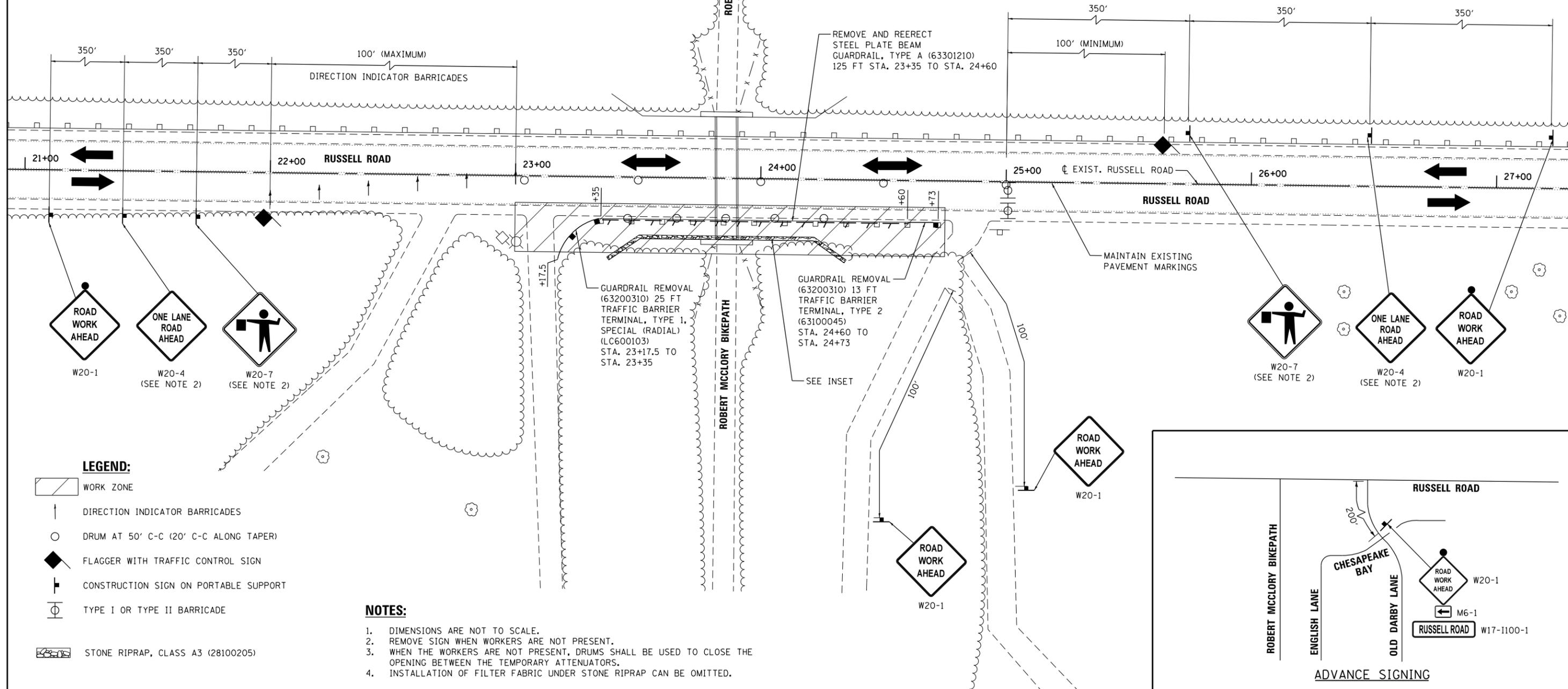
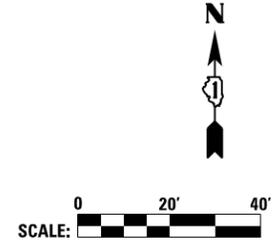
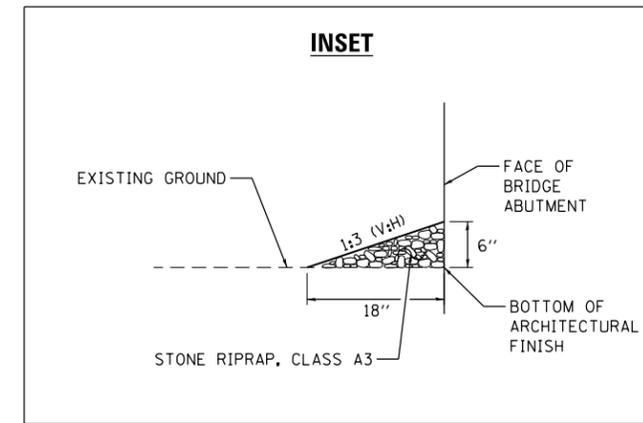


**ROBERT McCLORY BIKE PATH OVER RUSSELL RD.**  
**MAINTENANCE OF TRAFFIC – STAGE 1**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	9	48

**MAINTENANCE OF TRAFFIC/SEQUENCE OF CONSTRUCTION – STAGE 2**

1. INSTALL DAILY LANE CLOSURE PER PLANS DURING OFF-PEAK HOURS (8:00 A.M. TO 4:00 P.M. MONDAY THRU FRIDAY).
2. REMOVE EXISTING GUARDRAIL.
3. MAKE REPAIRS TO SOUTH BRIDGE ABUTMENT.
4. RE-ERECT EXISTING GUARDRAIL WITH NEW WOOD BLOCKOUTS AND INSTALL NEW GUARDRAIL TERMINALS PER PLANS.

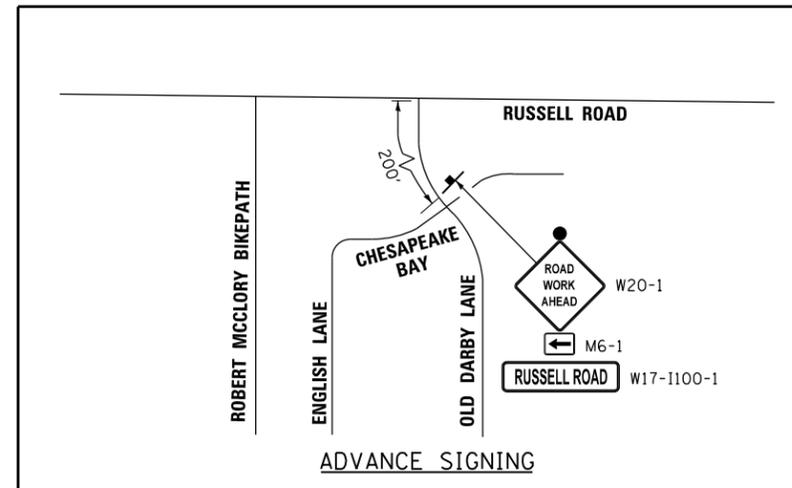


**LEGEND:**

- WORK ZONE
- DIRECTION INDICATOR BARRICADES
- DRUM AT 50' C-C (20' C-C ALONG TAPER)
- FLAGGER WITH TRAFFIC CONTROL SIGN
- CONSTRUCTION SIGN ON PORTABLE SUPPORT
- TYPE I OR TYPE II BARRICADE
- STONE RIPRAP, CLASS A3 (28100205)

**NOTES:**

1. DIMENSIONS ARE NOT TO SCALE.
2. REMOVE SIGN WHEN WORKERS ARE NOT PRESENT.
3. WHEN THE WORKERS ARE NOT PRESENT, DRUMS SHALL BE USED TO CLOSE THE OPENING BETWEEN THE TEMPORARY ATTENUATORS.
4. INSTALLATION OF FILTER FABRIC UNDER STONE RIPRAP CAN BE OMITTED.



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		/ /		PLOTTED BY:	Jacob.nardulli

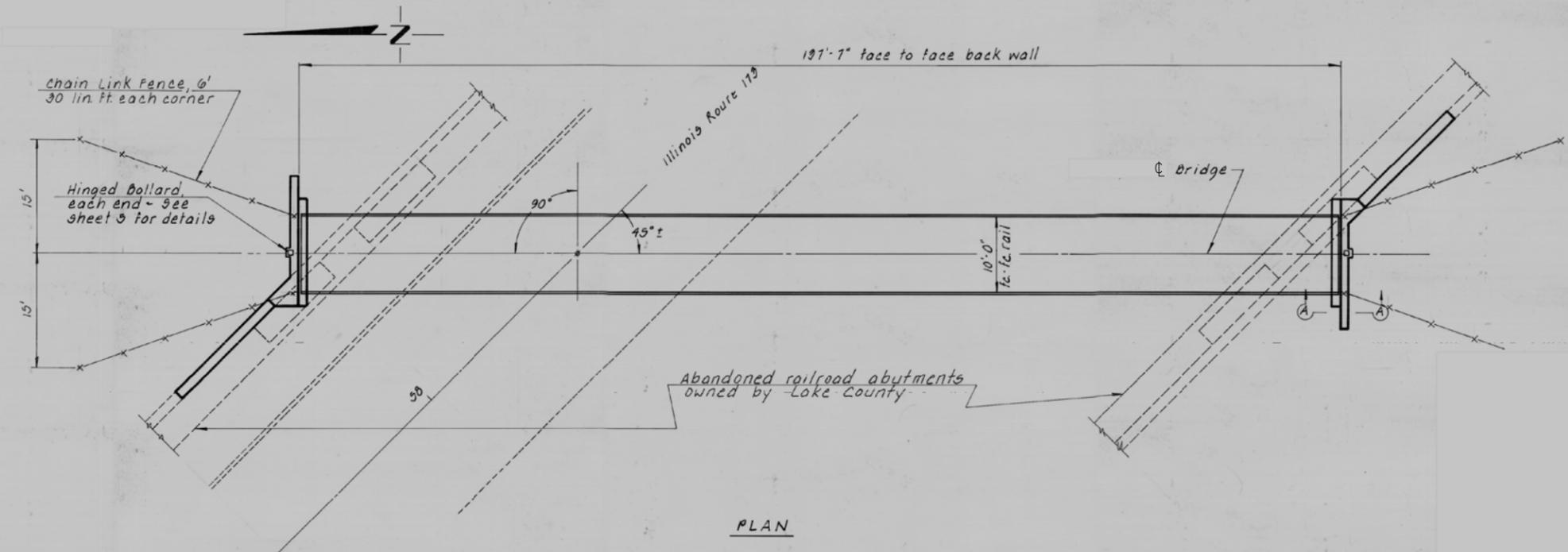
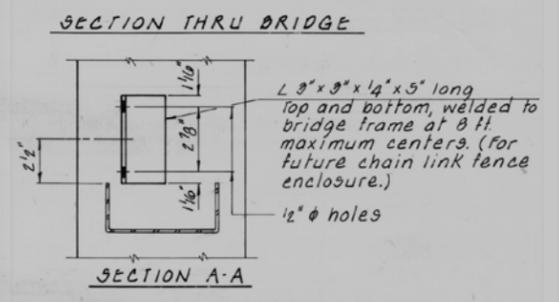
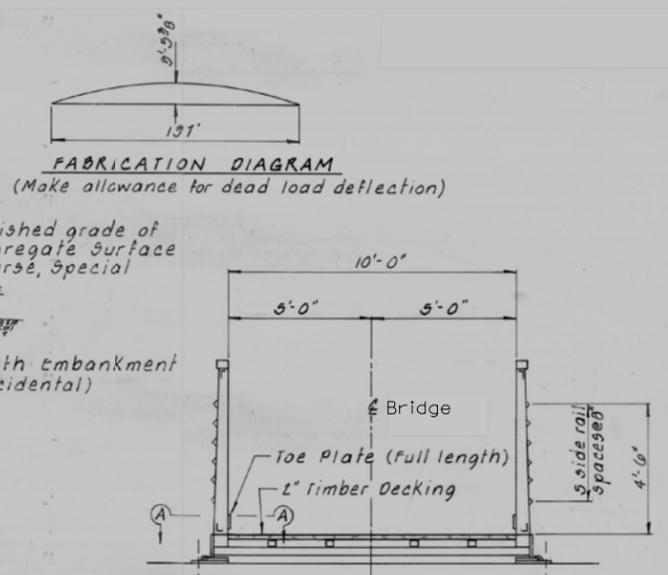
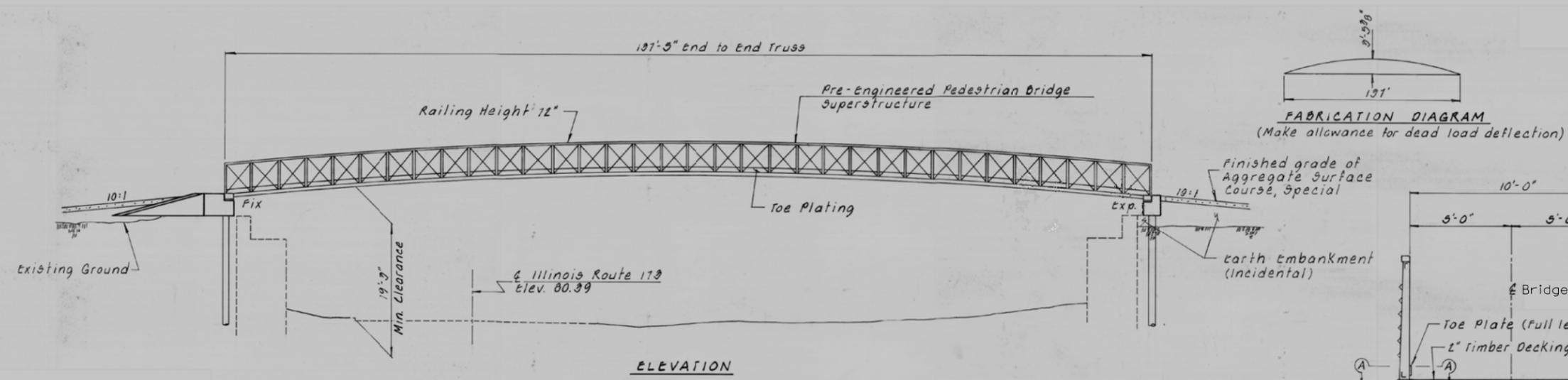
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**ROBERT MCCLORY BIKE PATH OVER RUSSELL RD.**  
**MAINTENANCE OF TRAFFIC – STAGE 2**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	10	48





**GENERAL NOTES**

Anchor bolts used for the abutment bridge bearings shall be hot dipped galvanized.  
 Reinforcement bars shall conform to the requirements of M-31, M-42, or M-53 Grade 60.  
 Plan dimensions and details relative to the existing concrete abutments have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

**DESIGN STRESSES**

$f_s = 27,000$  p.s.i. (Structural)  
 $f_c = 1,400$  p.s.i. (Class X Concrete)  
 $f_s = 20,000$  p.s.i. (Reinforcement)  
 $n = 9$  (Class X Concrete)  
 Design Loading: 310 Lbs./Ft. Dead Load (includes allowance for future chain link fence enclosure.)  
 85 Lbs./Sq. Ft. Live Load uniform.  
 10,000 Lbs. Live Load concentrated.  
 (Not to be used simultaneously with 85 Lbs./Sq. Ft. uniform Live Load)

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**ROBERT McCLORY BIKE PATH OVER IL-173**  
 GENERAL PLAN AND ELEVATION - FOR INFORMATION ONLY

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	12	48

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
* Tree Removal (6 to 15 Units Diameter)	Unit	10
* Tree Removal (Over 15 Units Diameter)	Unit	36
* Topsoil Furnish and Place, Variable Depth	Sq Yd	18
* Topsoil Furnish and Place, 4"	Sq Yd	522
Seeding, Class 2A	Acre	0.1
Seeding, Class 4A	Acre	0.1
Nitrogen Fertilizer Nutrient	Pound	1
Potassium Fertilizer Nutrient	Pound	1
* Filter Fabric	Sq Yd	522
Epoxy Crack Injection	Foot	64
Manholes to be Adjusted	Each	1
Steel Plate Beam Guardrail, Type A, 6 Foot Posts	Foot	12.5
Steel Plate Beam Guardrail, Type B, 6 Foot Posts	Foot	25
Traffic Barrier Terminal, Type 2	Each	1
Traffic Barrier Terminal, Type 10	Each	2
Guardrail Removal	Foot	75
* Maintenance of Temporary Erosion Control Systems	Unit	3,014
* Traffic Barrier Terminal, Type 1, Special (Radial)	Each	1
* Guardrail Reflectors	Each	3
* Anti-Graffiti Protection System	Sq Ft	950
* Porous Granular Embankment, Special	Cu Yd	830
* Erosion Control Blanket (Special)	Sq Yd	540
* Inlet Protection, Special	Each	5
* Architectural Finish for Concrete Structures	Sq Ft	950
* Perimeter Erosion Barrier, Rolled Excelsior	Foot	218
* Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq Ft	1,042
* Structural Repair of Concrete (Depth Greater than 5 inches)	Sq Ft	46

\* Special Provision

**GENERAL NOTES**

- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system at the contractor's expense.
- Contractor shall not scale dimensions from the contract plans for construction purposes. Scales shown are for information only.
- It shall be the contractor's responsibility to verify the location of all utilities prior to starting construction. contact J.U.L.I.E., 800-892-0123.
- The contractor shall use care when excavating around existing foundations. Any damage to the existing structure and/or supporting foundation shall be repaired or replaced at the contractor's expense.
- Whenever any material is deposited into a drainage system or drainage structures, the deposited material shall be removed at the close of each working day. At the conclusion of construction operations, all drainage systems and structures shall be free from dirt and debris deposited during the various construction operations.
- No welding of reinforcement bars shall be performed.
- Only those trees designated by the engineer shall be removed. The contractor shall protect all remaining trees from damage due to his operations.
- The As-Built bridge plans have been included within this set for information only. The Contractor shall field verify existing dimensions and details affecting construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- All temporary and permanent erosion control measures must be maintained and repaired as needed.
- All temporary sediment control measures shall be removed within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed.
- The erosion control measures indicated on the plans are the minimum requirements. additional measures may be required, as directed by the Engineer, Enforcement Officer, or other governing agency.
- Areas or embankments with 2:1 slopes or steeper shall be stabilized with sod or Erosion Control Blanket (Special) in combination with seeding.
- Perimeter Erosion Barrier, Rolled Excelsior shall be installed at locations specified in the plans at 1 foot outside the toe of slope or inside the right-of-way whichever is closer to the centerline, or as directed by the Engineer prior to the start of any earthwork, culvert, or storm sewer construction.
- The Perimeter Erosion Barrier, Rolled Excelsior shall remain in place until all disturbed areas have been stabilized with vegetation. at this time, the Perimeter Erosion Barrier, Rolled Excelsior shall be removed and areas damaged by the Perimeter Erosion Barrier, Rolled Excelsior removal shall be restored. The restoration of the area disturbed by the Perimeter Erosion Barrier, Rolled Excelsior removal shall be included in the pay item of Perimeter Erosion Barrier, Rolled Excelsior.
- The installation & removal of Perimeter Erosion Barrier, Rolled Excelsior shall be paid for under the item of Perimeter Erosion Barrier, Rolled Excelsior. Maintenance of Perimeter Erosion Barrier, Rolled Excelsior shall be paid for under the item of Maintenance of Temporary Erosion Control Systems.
- All seeded areas shall be covered with Erosion Control Blanket (Special).
- Heavy construction equipment shall be prohibited on the pedestrian bridge.

**SEQUENCE OF CONSTRUCTION**

- The contractor shall coordinate construction activities with Lake County Division of Transportation and the Illinois Department of Transportation. The contractor shall contact the engineer at least 72 hours in advance of beginning work.
- See sheets 16 thru 19 for sequence of construction regarding maintenance of traffic and lane closures.
- Maintain two way traffic on the trail on the bridge. Pedestrians and bike riders shall be protected from work activities and debris.
- Perform structural repair of concrete to the north abutment per plans and construct embankment cone at south abutment.
- Seed embankment cone according to sheet 19.

**INDEX OF SHEETS - ROBERT McCLORY BIKE PATH OVER IL-173**

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12	General Plan and Elevation - For Information Only
13	Index of Sheets, Notes and Total BOM
14	Plan and Profile
15	Pedestrian Bridge Abutments - For Information Only
16 thru 17	Maintenance of Traffic - North Abutment
18	Guardrail Detail
19	Maintenance of Traffic - South Abutment and Seeding
20	North Abutment Repair
21	Embankment Cone and Drainage Plan
22	Embankment Cone Sections

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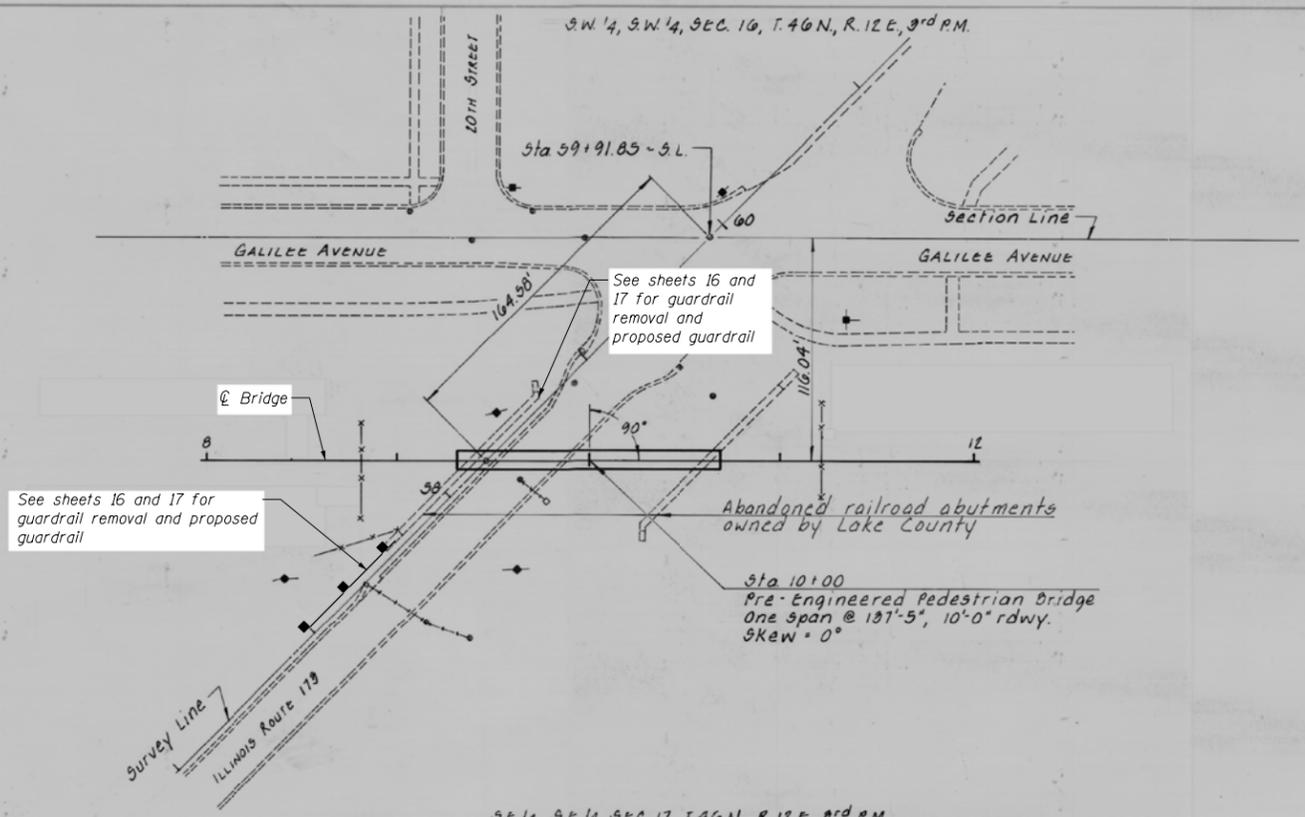
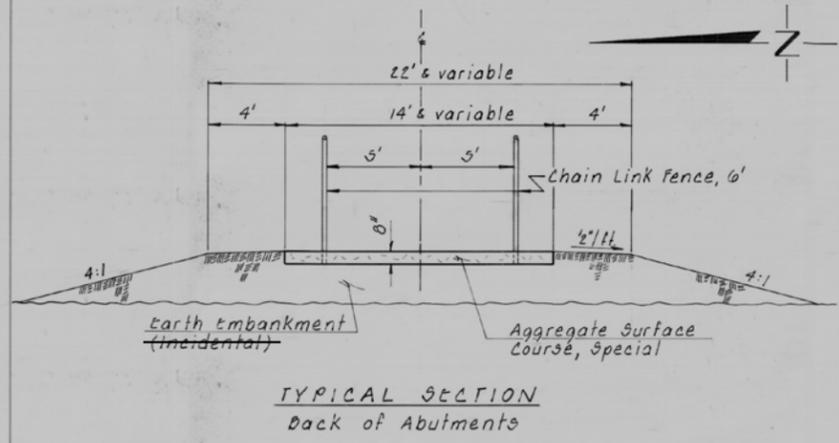


**ROBERT McCLORY BIKE PATH OVER IL-173**

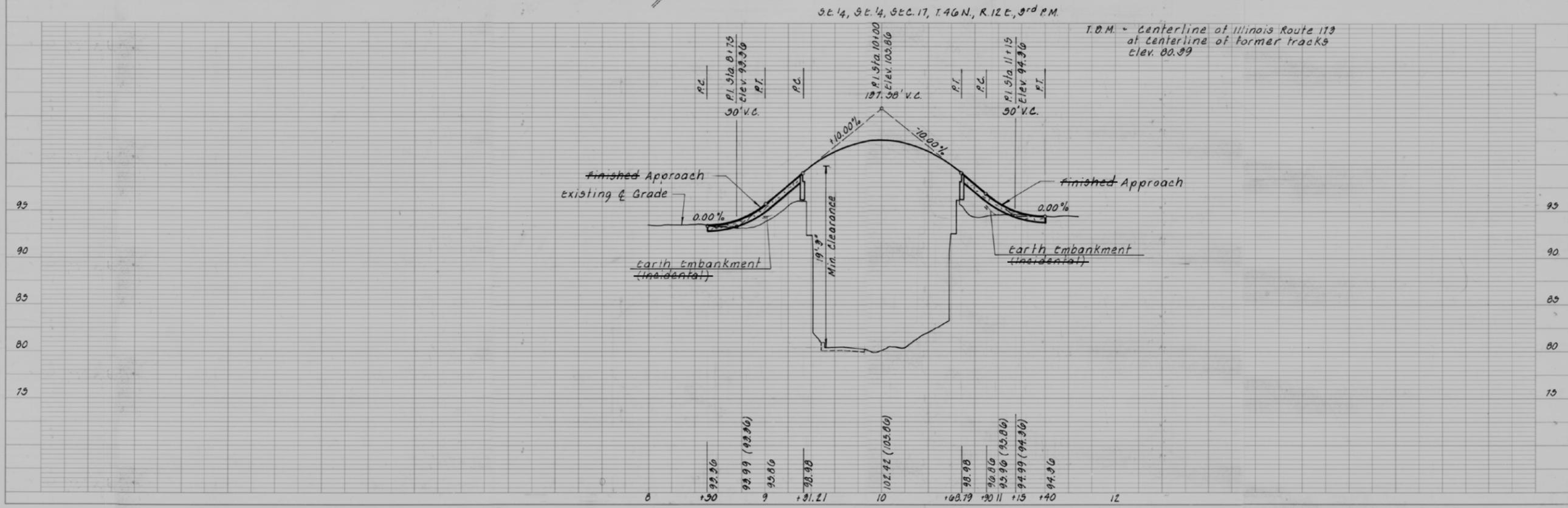
**INDEX OF SHEETS, NOTES AND TOTAL BOM**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	13	48

PLAN  
 NO. 1  
 DATE 6/23/2016  
 DRAWN BY CRS/MPB  
 CHECKED BY CRS/MPB  
 PLOTTED BY christopher.stanuch



PROFILE  
 NO. 1  
 DATE 6/23/2016  
 DRAWN BY CRS/MPB  
 CHECKED BY CRS/MPB  
 PLOTTED BY christopher.stanuch

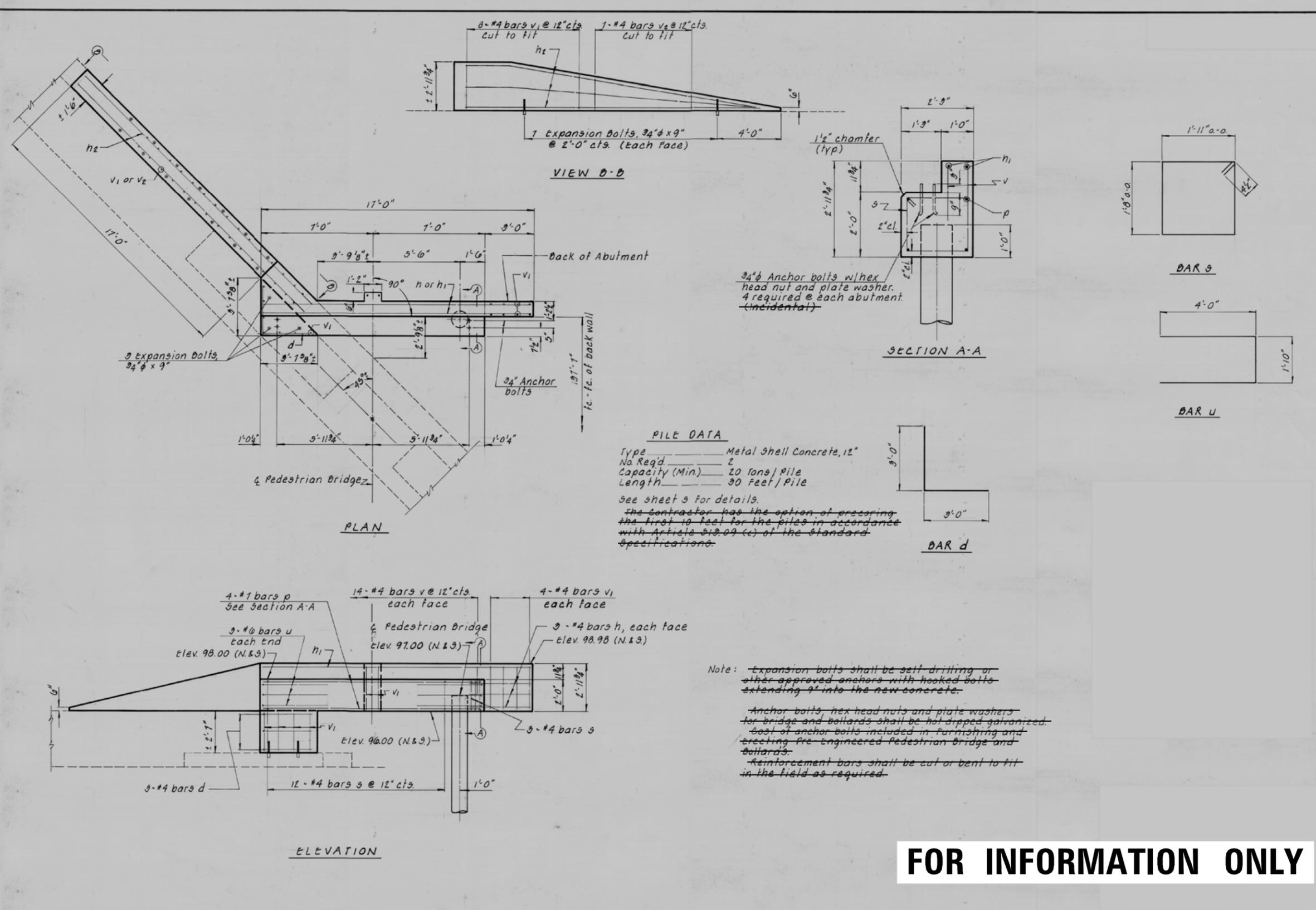


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ROBERT McCLORY BIKE PATH OVER IL-173		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
PLAN AND PROFILE		--	173	16-00173-14-BR	14	48



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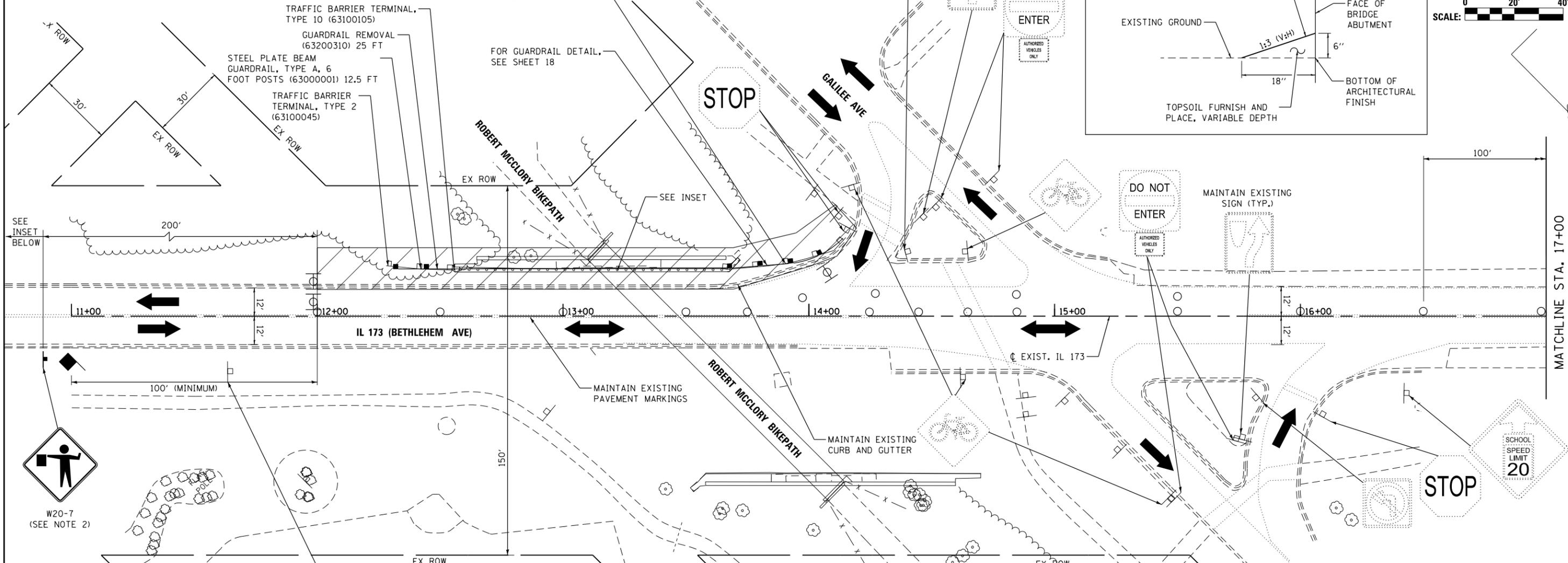


**ROBERT McCLORY BIKE PATH OVER IL-173**  
**PEDESTRIAN BRIDGE ABUTMENTS - FOR INFORMATION ONLY**

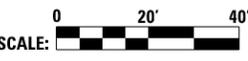
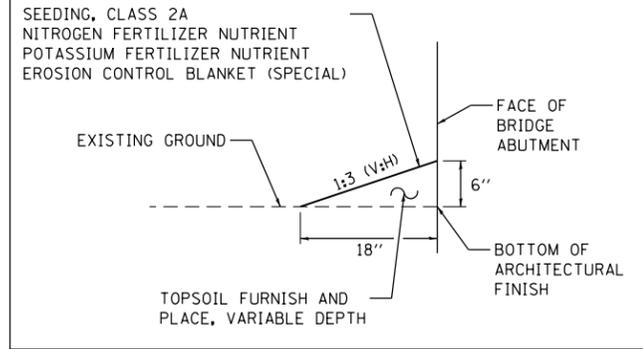
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	15	48

**MAINTENANCE OF TRAFFIC/SEQUENCE OF CONSTRUCTION**

1. INSTALL DAILY LANE CLOSURE PER PLANS DURING OFF-PEAK HOURS (8:00 A.M. TO 4:00 P.M. MONDAY THRU FRIDAY).
2. REMOVE EXISTING GUARDRAIL AND MAKE REPAIRS TO NORTH BRIDGE ABUTMENT.
3. INSTALL GUARDRAIL PER PLANS.



**INSET**

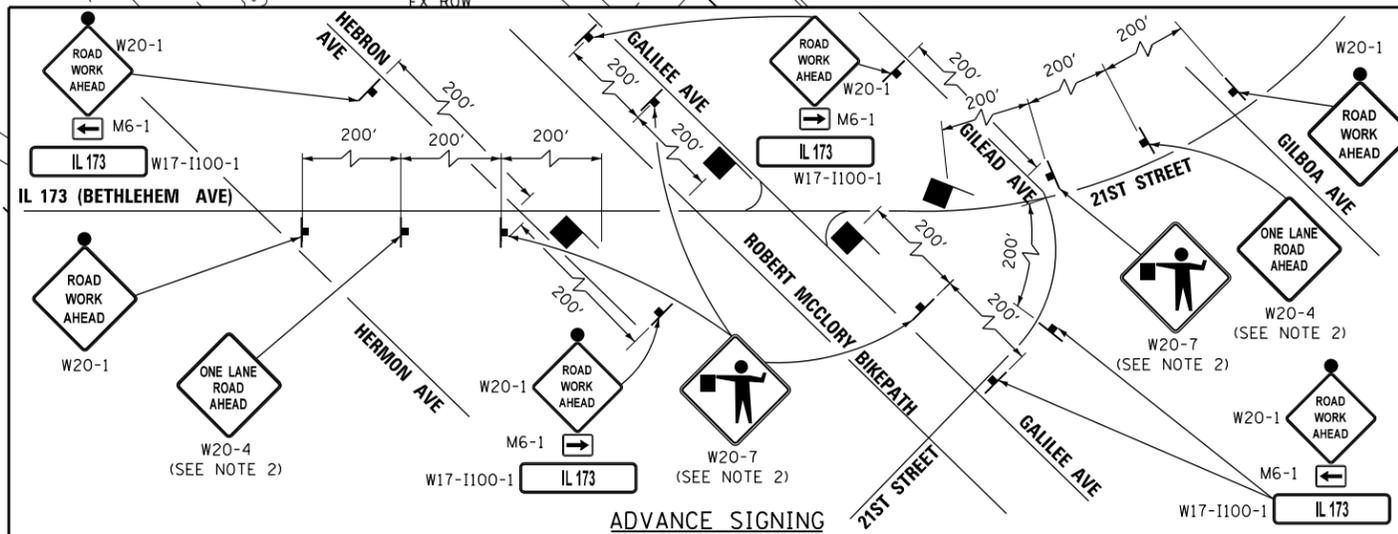


**LEGEND:**

- WORK ZONE
  - DIRECTION INDICATOR BARRICADES
  - DRUM AT 50' C-C (20' C-C ALONG TAPER)
  - FLAGGER WITH TRAFFIC CONTROL SIGN
  - CONSTRUCTION SIGN ON PORTABLE SUPPORT
  - TYPE I OR TYPE II BARRICADE
- SEEDING, CLASS 2A (25000210)  
 NITROGEN FERTILIZER NUTRIENT (25000400)  
 POTASSIUM FERTILIZER NUTRIENT (25000600)  
 EROSION CONTROL BLANKET (SPECIAL) (X2511630)  
 TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH (21101600)

**NOTES:**

1. DIMENSIONS ARE NOT TO SCALE.
2. REMOVE SIGN WHEN WORKERS ARE NOT PRESENT.

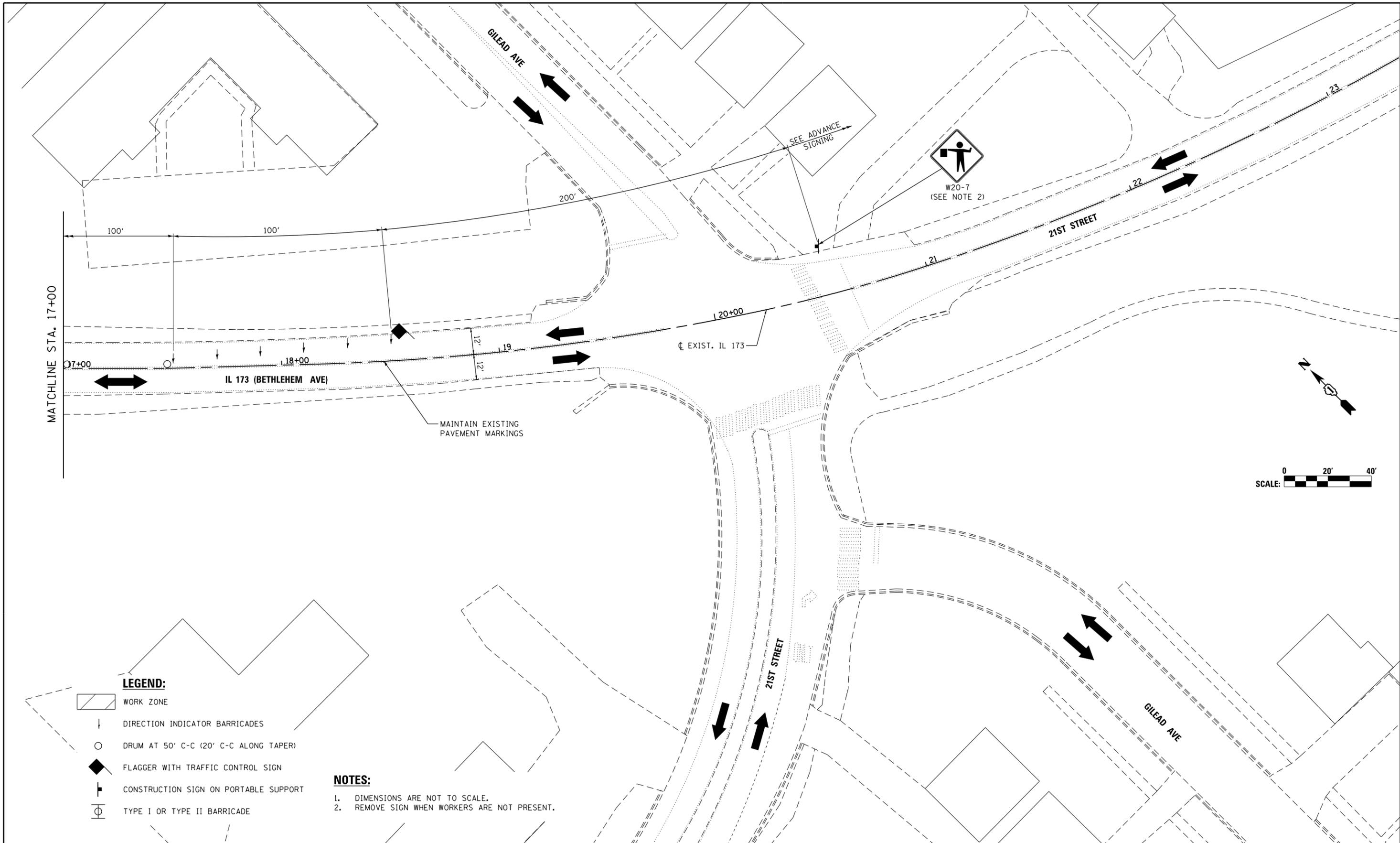


REVISIONS / REMARKS		DATE	BY	PLOT DATE:	6/23/2016
NO.	DESCRIPTION	DATE	BY	DSGNR/CHECKED BY:	JAN/TC
				PLOTTED BY:	christopher.stanuch

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 foster  
 wheeler  
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<b>ROBERT McCLORY BIKE PATH OVER IL-173</b> <b>MAINTENANCE OF TRAFFIC - NORTH ABUTMENT</b>		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
		--	173	16-00173-14-BR	16	48



**LEGEND:**

-  WORK ZONE
-  DIRECTION INDICATOR BARRICADES
-  DRUM AT 50' C-C (20' C-C ALONG TAPER)
-  FLAGGER WITH TRAFFIC CONTROL SIGN
-  CONSTRUCTION SIGN ON PORTABLE SUPPORT
-  TYPE I OR TYPE II BARRICADE

**NOTES:**

1. DIMENSIONS ARE NOT TO SCALE.
2. REMOVE SIGN WHEN WORKERS ARE NOT PRESENT.

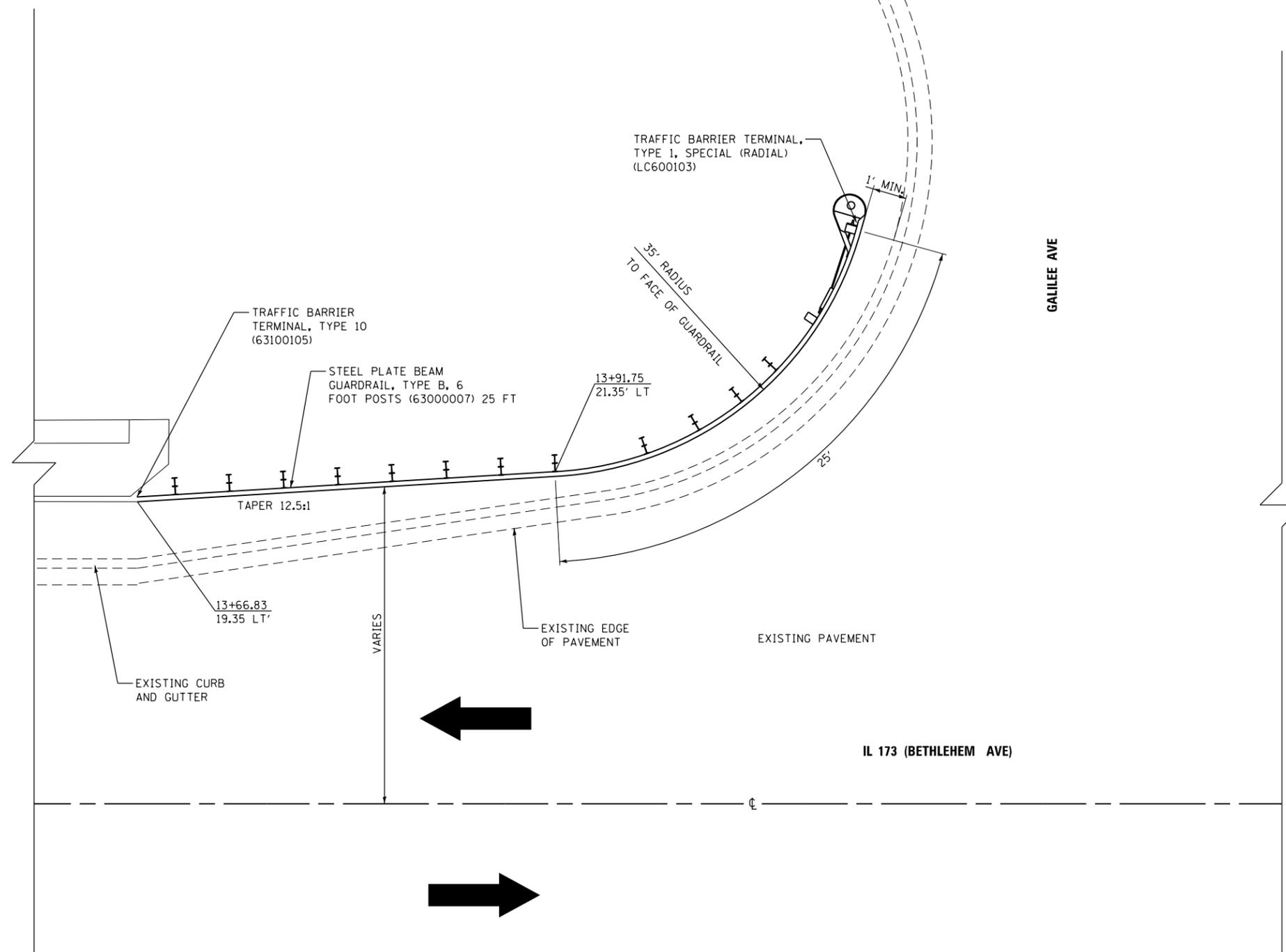
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NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	JAN/TC
		/ /		PLOTTED BY:	christopher.stanuch


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**ROBERT McCLORY BIKE PATH OVER IL-173**  
**MAINTENANCE OF TRAFFIC - NORTH ABUTMENT**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	17	48



*GUARDRAIL DETAIL*

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		6/23/2016
		/ /	JAN/CRS	
		/ /	christopher.stanuch	

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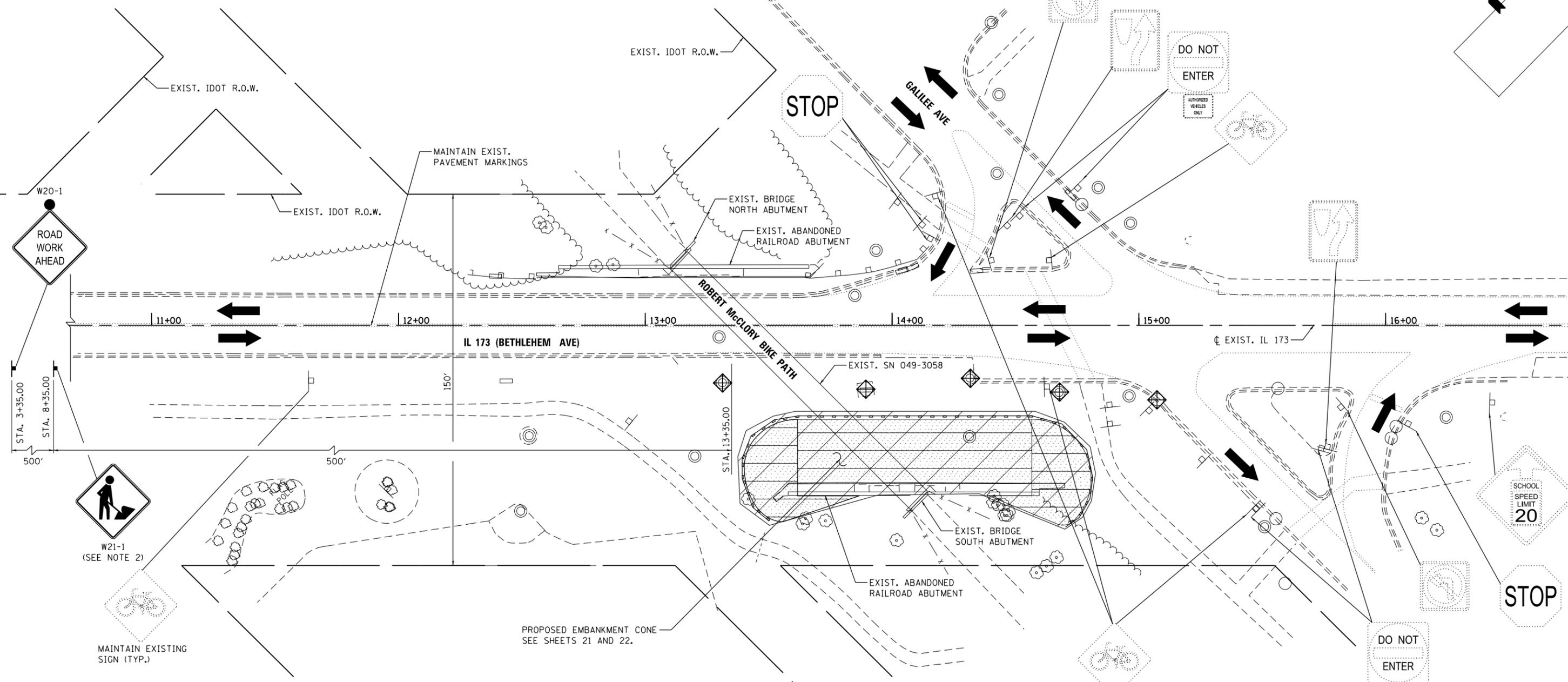


**ROBERT McCLORY BIKE PATH OVER IL-173**  
**GUARDRAIL DETAIL**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	18	48

**MAINTENANCE OF TRAFFIC / SEQUENCE OF CONSTRUCTION**

1. LOCATE SIGNAGE PER PLANS.
2. INSTALL PROPOSED EMBANKMENT CONE.
3. COMPLETE SEEDING AND LANDSCAPING.



**LEGEND:**

- WORK ZONE
- CONSTRUCTION SIGN ON PORTABLE SUPPORT
- SEEDING, CLASS 4A (25000312)
- EROSION CONTROL BLANKET (SPECIAL) (X2511630)
- TOPSOIL FURNISH AND PLACE, 4" (21101615)
- FILTER FABRIC (28200200)
- PERIMETER EROSION BARRIER, ROLLED EXCELSIOR (XX006729)
- INLET PROTECTION, SPECIAL

**NOTES:**

1. DIMENSIONS ARE NOT TO SCALE.
2. REMOVE SIGN WHEN WORKERS ARE NOT PRESENT.
3. NO WORK SHALL BE PERFORMED ON THE NORTH ABUTMENT WHEN MAINTENANCE OF TRAFFIC IS INSTALLED ACCORDING TO THIS SHEET.



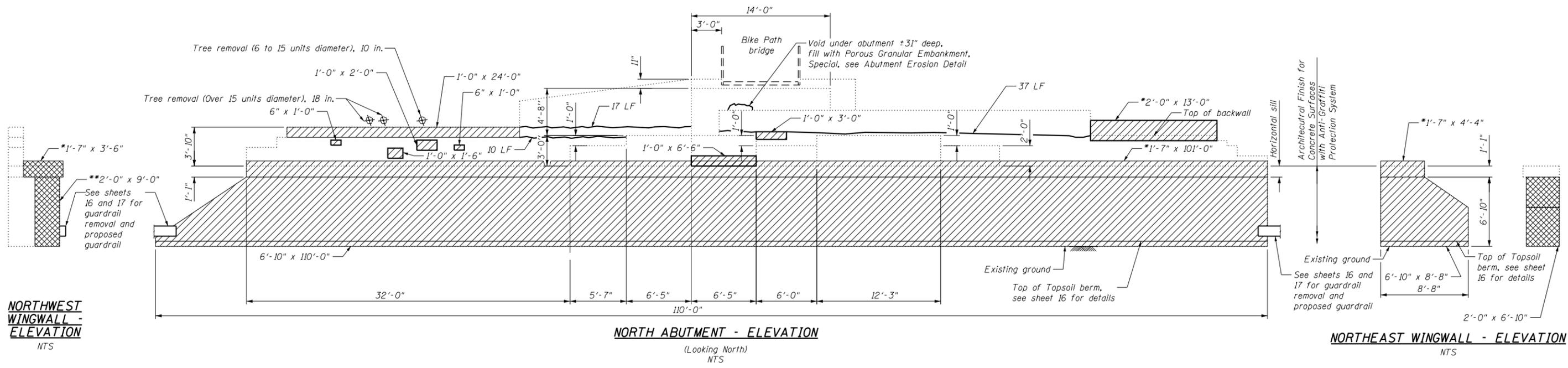
REVISIONS / REMARKS		DATE	BY	PLOT DATE:	6/23/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	JAN/TC
		/ /		PLOTTED BY:	christopher.stanuch

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**ROBERT McCLORY BIKE PATH OVER IL-173**  
**MAINTENANCE OF TRAFFIC – SOUTH ABUTMENT AND SEEDING**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	19	48

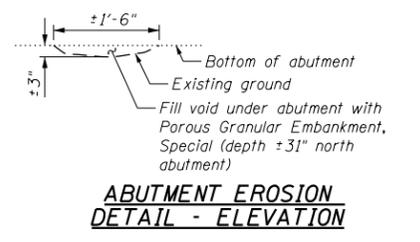


**NORTHWEST WINGWALL - ELEVATION**  
NTS

**NORTH ABUTMENT - ELEVATION**  
(Looking North)  
NTS

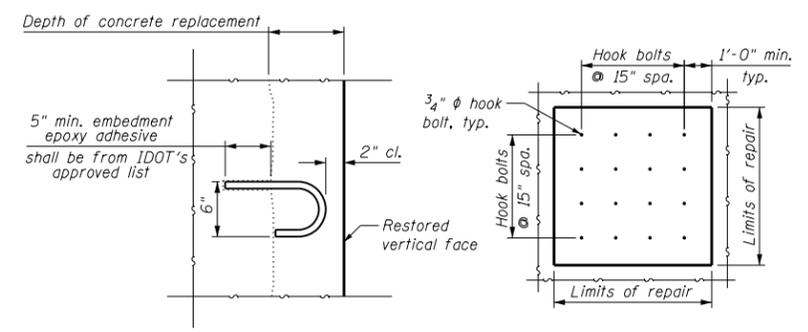
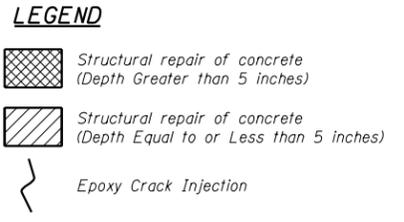
**NORTHEAST WINGWALL - ELEVATION**  
NTS

- \* Hatched area outside member denotes the deterioration continues onto the adjacent face of that member.
- \*\* Measured along hypotenuse of wing wall.



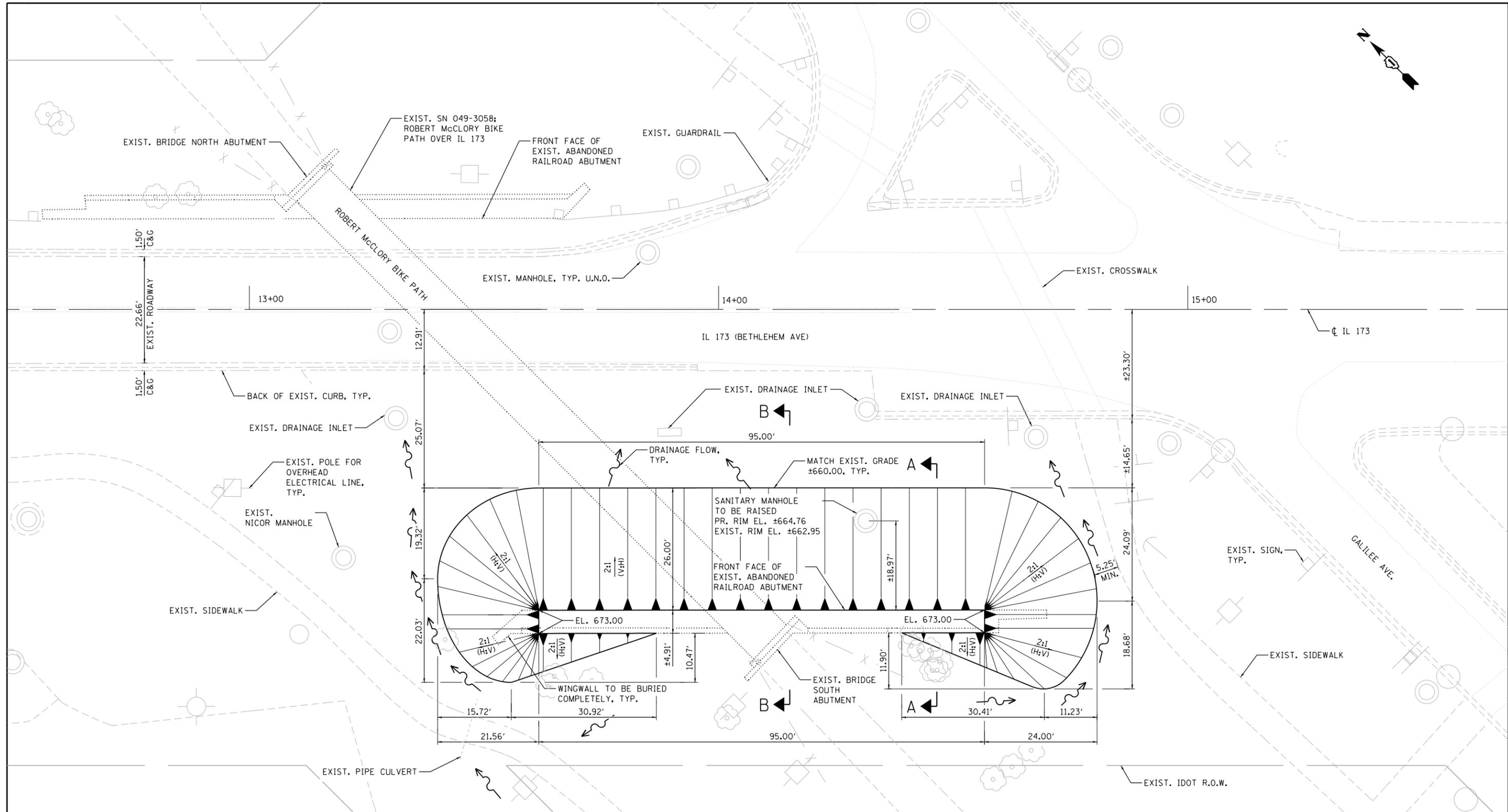
**BILL OF MATERIAL**

Description	Unit	Quantity
Tree Removal (6 to 15 Units Diameter)	Unit	10
Tree Removal (Over 15 Units Diameter)	Unit	36
Epoxy Crack Injection	Foot	64
Anti-Graffiti Protection System	Sq Ft	950
Porous Granular Embankment, Special	Cu Yd	0.1
Architectural Finish for Concrete Surfaces	Sq Ft	950
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq Ft	1,042
Structural Repair of Concrete (Depth Greater than 5 inches)	Sq Ft	46



**HOOK BOLT REPAIR DETAIL**

- Notes:
- Remove all loose concrete on the face of the abutment and wingwalls.
  - Restore all areas above the horizontal sill of the North Abutment to their original dimensions.
  - From the top of the horizontal sill at the North Abutment, remove additional concrete as necessary and build up areas where loose concrete was removed to provide an even, smooth surface in preparation of the Architectural Finish.
  - Map cracking was found across the majority of the north abutment.
  - Hook bolts shall be installed where the depth of concrete replacement is greater than 8 inches and there is no existing reinforcement in the repair area. See Special Provisions. Cost of hook bolts shall be included in Structural Repair of Concrete (Depth Greater than 5 In.).
  - Where depth of concrete replacement is greater than 6 inches formed concrete repair shall be used.
  - Where depth of concrete replacement is less than 6 inches and the area of repair is greater than 100 sq. ft. high performance shotcrete is recommended for repair with a final finish by a wood float to approximately match the existing concrete texture.
  - Repair area and exposed reinforcement shall be blast cleaned to provide an oil, dirt, and loose material free surface.
  - Clearing of the area around structures shall be performed according to Section 201 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction. No payment will be made for this work.



**NOTES:**

1. THE CITY OF ZION IS THE OWNER OF THE SANITARY MANHOLE, CONTACT RAY ROBERTS AT 847-746-4055 WHEN THE MANHOLE IS SCHEDULED TO BE ADJUSTED.
2. AS PER THE CITY OF ZION MUNICIPAL CODE, 2" TALL RINGS CAN BE STACKED TO A HEIGHT EQUAL TO OR LESS THAN 8".

**EMBANKMENT CONE AND DRAINAGE PLAN**

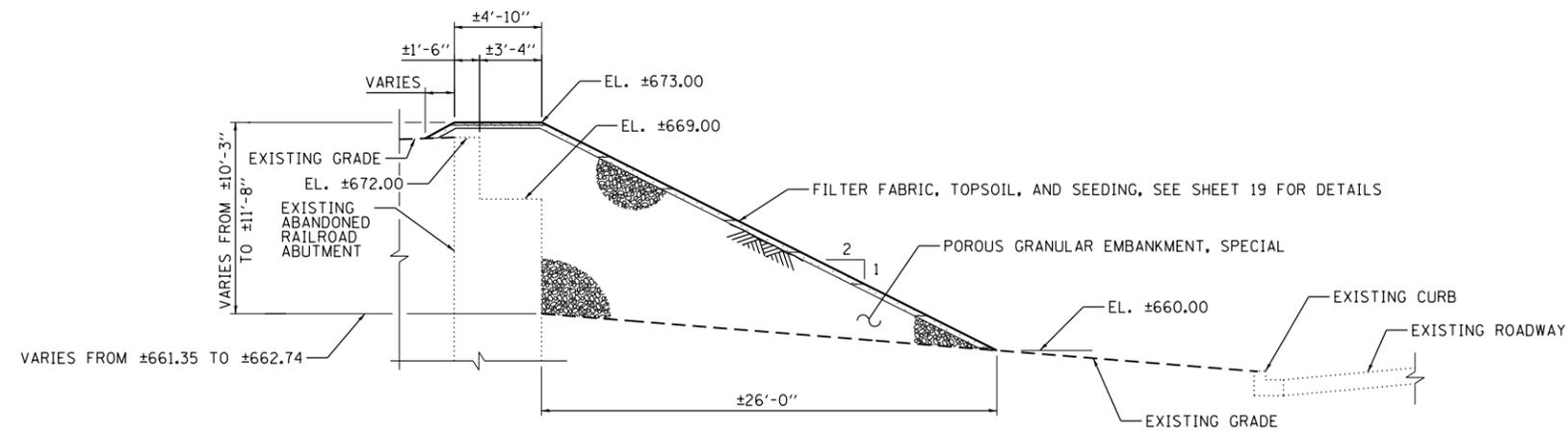


REVISIONS / REMARKS		DATE	BY	PLOT DATE:	6/23/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/JY
		/ /		PLOTTED BY:	christopher.stanuch

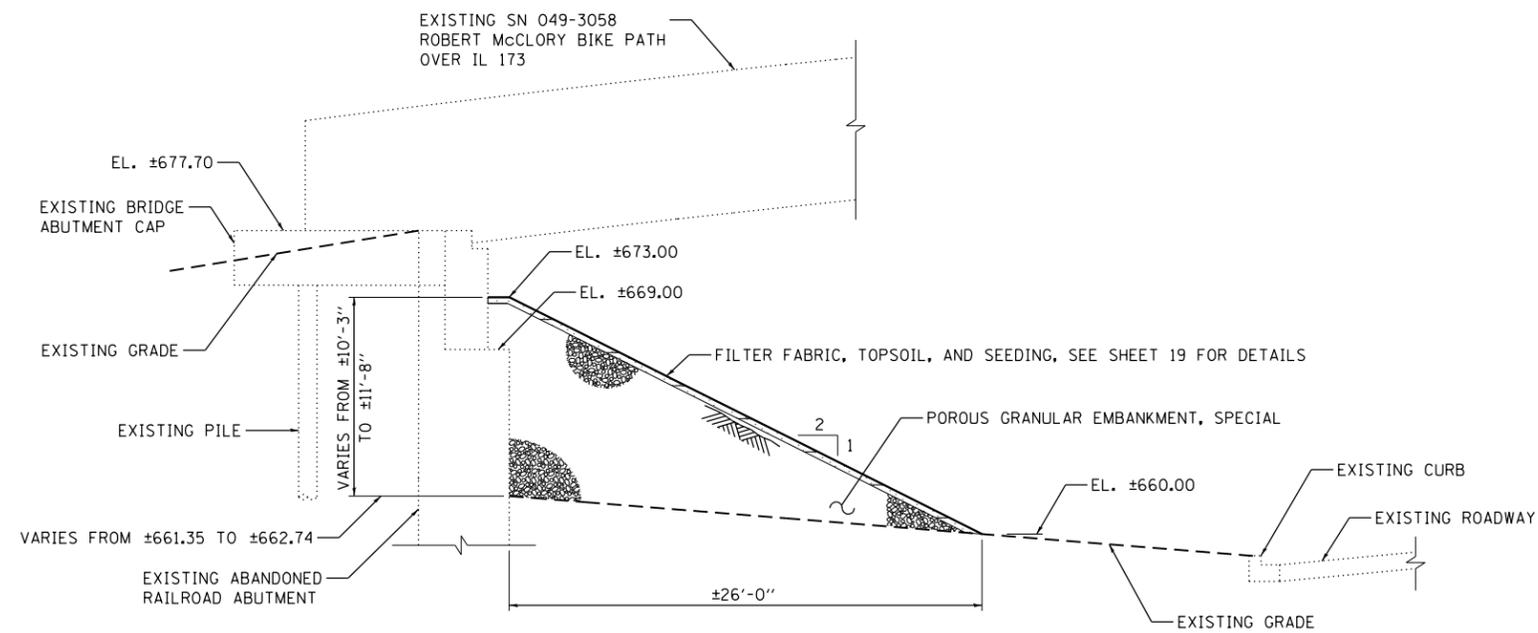
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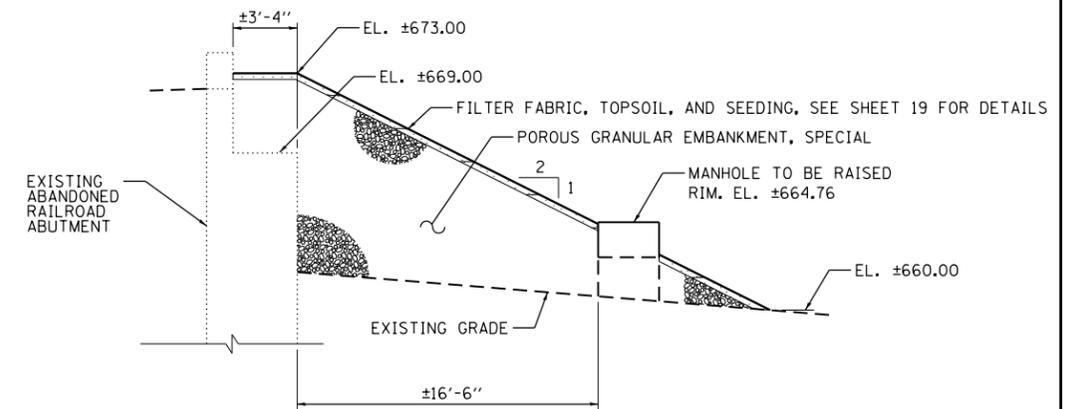
<b>ROBERT McCLORY BIKE PATH OVER IL-173</b>		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
<b>EMBANKMENT CONE AND DRAINAGE PLAN</b>		--	173	16-00173-14-BR	21	48



**SECTION A-A**



**SECTION B-B**



**SECTION THRU MANHOLE TO BE RAISED**

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	6/23/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/JY
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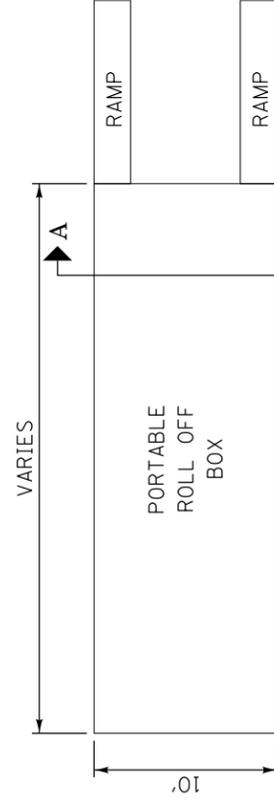
**ROBERT McCLORY BIKE PATH OVER IL-173**  
**EMBANKMENT CONE SECTIONS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	173	16-00173-14-BR	22	48

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	6/22/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/JAN
		/ /		PLOTTED BY:	christopher.stanuch

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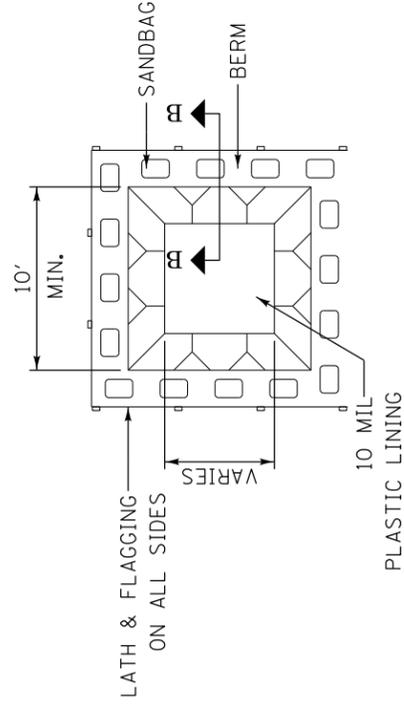
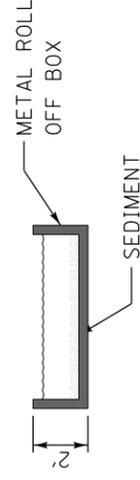
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PLAN VIEW

PREFAB PORTABLE WASHOUT

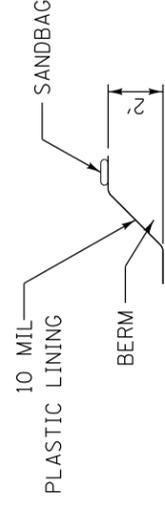
SECTION A-A



PLAN VIEW

BELOW GRADE

SECTION B-B



NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOT TO SCALE

REVISIONS	DATE



APPROVED BY: MGZ  
DATE: March 17, 2008

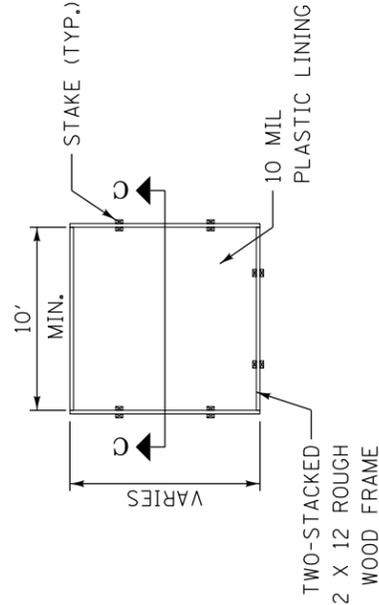
LC4202

CONCRETE WASHOUT FACILITIES  
SHEET 1 OF 2



ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS  
LCDOT STANDARDS AND DETAILS

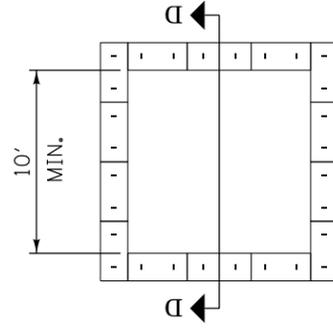
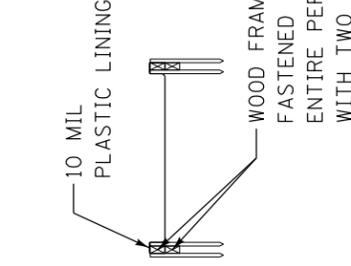
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	23	48



PLAN VIEW

ABOVE GRADE

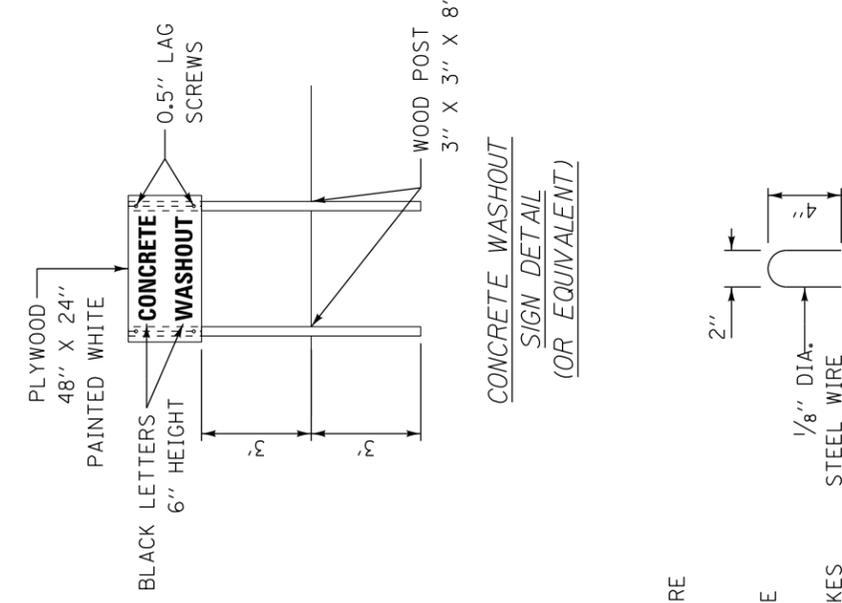
SECTION C-C



PLAN VIEW

ABOVE GRADE WITH STRAPLES

SECTION D-D



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

NOT TO SCALE

REVISIONS	DATE



APPROVED BY: MGZ  
DATE: March 17, 2008

LC4202

CONCRETE WASHOUT FACILITIES  
SHEET 2 OF 2



ABV	ABOVE	CU YD	CUBIC YARD	HD	HEAD	PED	PEDESTAL	STD	STANDARD
A/C	ACCESS CONTROL	CULV	CULVERT	HDW	HEADWALL	PNT	POINT	SBI	STATE BOND ISSUE
AC	ACRE	C&G	CURB & GUTTER	HDUTY	HEAVY DUTY	PC	POINT OF CURVATURE	SR	STATE ROUTE
ADJ	ADJUST	D	DEGREE OF CURVE	ha	HECTARE	PI	POINT OF INTERSECTION OF HORIZONTAL CURVE	STA	STATION
AS	AERIAL SURVEYS	DC	DEPRESSED CURVE	HMA	HOT MIX ASPHALT	PRC	POINT OF REVERSE CURVE	SPBGR	STEEL PLATE BEAM GUARDRAIL
AGG	AGGREGATE	DET	DETECTOR	HWY	HIGHWAY	PT	POINT OF TANGENCY	SS	STORM SEWER
AH	AHEAD	DIA	DIAMETER	HORIZ	HORIZONTAL	POT	POINT ON TANGENT	STY	STORY
APT	APARTMENT	DIST	DISTRICT	HSE	HOUSE	POLYETH	POLYETHYLENE	ST	STREET
ASPH	ASPHALT	DOM	DOMESTIC	IL	ILLINOIS	PCC	PORTLAND CEMENT CONCRETE	STR	STRUCTURE
AUX	AUXILIARY	DBL	DOUBLE	IMP	IMPROVEMENT	PP	POWER POLE OR PRINCIPAL POINT	e	SUPERELEVATION RATE
AGS	AUXILIARY GAS VALVE (SERVICE)	DSEL	DOWNSTREAM ELEVATION	IN DIA	INCH DIAMETER	PRM	PRIME	S.E. RUN.	SUPERELEVATION RUNOFF LENGTH
AVE	AVENUE	DSFL	DOWNSTREAM FLOWLINE	INL	INLET	PE	PRIVATE ENTRANCE	SURF	SURFACE
AX	AXIS OF ROTATION	DR	DRAINAGE OR DRIVE	INST	INSTALLATION	PROF	PROFILE	SMK	SURVEY MARKER
BK	BACK	DI	DRAINAGE INLET OR DROP INLET	IDS	INTERSECTION DESIGN STUDY	PGL	PROFILE GRADELINE	T	TANGENT DISTANCE
B-B	BACK TO BACK	DRV	DRIVEWAY	INV	INVERT	PROJ	PROJECT	T.R.	TANGENT RUNOUT DISTANCE
BKPL	BACKPLATE	DCT	DUCT	IP	IRON PIPE	P.C.	PROPERTY CORNER	TEL	TELEPHONE
B	BARN	EA	EACH	IR	IRON ROD	PL	PROPERTY LINE	TB	TELEPHONE BOX
BARR	BARRICADE	EB	EASTBOUND	JT	JOINT	PR	PROPOSED	TP	TELEPHONE POLE
BGN	BEGIN	EOP	EDGE OF PAVEMENT	kg	KILOGRAM	R	RADIUS	TEMP	TEMPORARY
BM	BENCHMARK	E-CL	EDGE TO CENTERLINE	km	KILOMETER	RR	RAILROAD	TBM	TEMPORARY BENCH MARK
BIND	BINDER	E-E	EDGE TO EDGE	LS	LANDSCAPING	RRS	RAILROAD SPIKE	TD	TILE DRAIN
BIT	BITUMINOUS	EL	ELEVATION	LN	LANE	RPS	REFERENCE POINT STAKE	TBE	TO BE EXTENDED
BTM	BOTTOM	ENTR	ENTRANCE	LT	LEFT	REF	REFLECTIVE	TBR	TO BE REMOVED
BLVD	BOULEVARD	EXC	EXCAVATION	LP	LIGHT POLE	RCCP	REINFORCED CONCRETE CULVERT PIPE	TBS	TO BE SAVED
BRK	BRICK	EX	EXISTING	LGT	LIGHTING	REINF	REINFORCEMENT	TWP	TOWNSHIP
BBOX	BUFFALO BOX	EXPWAY	EXPRESSWAY	LF	LINEAL FEET OR LINEAR FEET	REM	REMOVAL	TR	TOWNSHIP ROAD
BLDG	BUILDING	E	EXTERNAL DISTANCE OF HORIZONTAL CURVE	L	LITER OR CURVE LENGTH	RC	REMOVE CROWN	TS	TRAFFIC SIGNAL
CIP	CAST IRON PIPE	E	OFFSET DISTANCE TO VERTICAL CURVE	LC	LONG CHORD	REP	REPLACEMENT	TSCB	TRAFFIC SIGNAL CONTROL BOX
CB	CATCH BASIN	F-F	FACE TO FACE	LNG	LONGITUDINAL	REST	RESTAURANT	TSC	TRAFFIC SYSTEMS CENTER
C-C	CENTER TO CENTER	FA	FEDERAL AID	L SUM	LUMP SUM	RESURF	RESURFACING	TRVS	TRANSVERSE
CL	CENTERLINE OR CLEARANCE	FAI	FEDERAL AID INTERSTATE	MACH	MACHINE	RET	RETAINING	TRVL	TRAVEL
CL-E	CENTERLINE TO EDGE	FAP	FEDERAL AID PRIMARY	MB	MAIL BOX	RT	RIGHT	TRN	TURN
CL-F	CENTERLINE TO FACE	FAS	FEDERAL AID SECONDARY	MH	MANHOLE	ROW	RIGHT-OF-WAY	TY	TYPE
CTS	CENTERS	FAUS	FEDERAL AID URBAN SECONDARY	MATL	MATERIAL	RD	ROAD	T-A	TYPE A
CERT	CERTIFIED	FP	FENCE POST	MED	MEDIAN	RDWY	ROADWAY	TYP	TYPICAL
CHSLD	CHISELED	FE	FIELD ENTRANCE	m	METER	RTE	ROUTE	UNDGND	UNDERGROUND
CS	CITY STREET	FH	FIRE HYDRANT	METH	METHOD	SAN	SANITARY	USGS	U.S. GEOLOGICAL SURVEY
CP	CLAY PIPE	FL	FLOW LINE	M	MID-ORDINATE	SANS	SANITARY SEWER	USEL	UPSTREAM ELEVATION
CLSD	CLOSED	FB	FOOT BRIDGE	mm	MILLIMETER	SEC	SECTION	USFL	UPSTREAM FLOWLINE
CLID	CLOSED LID	FDN	FOUNDATION	mm DIA	MILLIMETER DIAMETER	SEED	SEEDING	UTIL	UTILITY
CT	COAT OR COURT	FR	FRAME	MIX	MIXTURE	SHAP	SHAPING	VBOX	VALVE BOX
COMB	COMBINATION	F&G	FRAME & GRATE	MBH	MOBILE HOME	S	SHED	VV	VALVE VAULT
C	COMMERCIAL BUILDING	FRWAY	FREEWAY	MOD	MODIFIED	SH	SHEET	VLT	VAULT
CE	COMMERCIAL ENTRANCE	GAL	GALLON	MFT	MOTOR FUEL TAX	SHLD	SHOULDER	VEH	VEHICLE
CONC	CONCRETE	GALV	GALVANIZED	N & BC	NAIL & BOTTLE CAP	SW	SIDEWALK OR SOUTHWEST	VP	VENT PIPE
CONST	CONSTRUCT	G	GARAGE	N & C	NAIL & CAP	SIG	SIGNAL	VERT	VERTICAL
CONTD	CONTINUED	GM	GAS METER	N & W	NAIL & WASHER	SOD	SODDING	VC	VERTICAL CURVE
CONT	CONTINUOUS	GV	GAS VALVE	NOAA	NATIONAL OCEANIC ATMOSPHERIC	SM	SOLID MEDIUM	VPC	VERTICAL POINT OF CURVATURE
COR	CORNER	GRAN	GRANULAR	NC	NORMAL CROWN	SB	SOUTHBOUND	VPI	VERTICAL POINT OF INTERSECTION
CORR	CORRUGATED	GR	GRATE	NB	NORTHBOUND	SE	SOUTHEAST	VPT	VERTICAL POINT OF TANGENCY
CMP	CORRUGATED METAL PIPE	GRVL	GRAVEL	NE	NORTHEAST	SPL	SPECIAL	WM	WATER METER
CNTY	COUNTY	GND	GROUND	NW	NORTHWEST	SQ FT	SQUARE FEET	WV	WATER VALVE
CH	COUNTY HIGHWAY	GUT	GUTTER	OLID	OPEN LID	m <sup>2</sup>	SQUARE METER	WMMAIN	WATER MAIN
CSE	COURSE	GP	GUY POLE	PAT	PATTERN	mm <sup>2</sup>	SQUARE MILLIMETER	WB	WESTBOUND
XSECT	CROSS SECTION	GW	GUY WIRE	PVD	PAVED	SQ YD	SQUARE YARD	WILDFL	WILDFLOWERS
m <sup>3</sup>	CUBIC METER	HH	HANDHOLE	PVMT	PAVEMENT	STB	STABILIZED	W	WITH
mm <sup>3</sup>	CUBIC MILLIMETER	HATCH	HATCHING	PM	PAVEMENT MARKING			WO	WITHOUT

## STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 1 of 8)

**STANDARD 000001-06**

REVISIONS / REMARKS		DATE	BY	PLOT DATE	6/23/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/TC
		/ /		PLOTTED BY:	christopher.stanuch


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**LakeCounty**  
 Division of Transportation

**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**

**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	25	48

<u>ADJUSTMENT ITEMS</u>		<u>EX</u>	<u>PR</u>	<u>ALIGNMENT ITEMS</u>		<u>EX</u>	<u>PR</u>	<u>CONTOUR ITEMS</u>		<u>EX</u>	<u>PR</u>
Structure To Be Adjusted			ADJ	Baseline				Approx. Index Line			
Structure To Be Cleaned			C	Centerline				Approx. Intermediate Line			
Main Structure To Be Filled			FM	Centerline Break Circle		o	o	Index Contour			
Structure To Be Filled			F	Baseline Symbol		B	B	Intermediate Contour			
Structure To Be Filled Special			FSP	Centerline Symbol		C	C	<b><u>DRAINAGE ITEMS</u></b>			
Structure To Be Removed			R	PI Indicator		Δ	Δ	Channel or Stream Line			
Structure To Be Reconstructed			REC	Point Indicator		o	o	Culvert Line			
Structure To Be Reconstructed Special			RSP	Horizontal Curve Data (Half Size)		CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	Grading & Shaping Ditches			
Frame and Grate To Be Adjusted			A	<b><u>BOUNDARIES ITEMS</u></b>				<u>EX</u>	<u>PR</u>		
Frame and Lid To Be Adjusted			A	Dashed Property Line				Storm Sewer			
Domestic Service Box To Be Adjusted			A	Solid Property/Lot Line				Flowline			
Valve Vault To Be Adjusted			A	Section/Grant Line				Ditch Check			
Special Adjustment			SP	Quarter Section Line				Headwall			
Item To Be Abandoned			AB	Quarter/Quarter Section Line				Inlet			
Item To Be Moved			M	County/Township Line				Manhole			
Item To Be Relocated			REL	State Line				Summit			
Pavement Removal and Replacement				Iron Pipe Found		o		Roadway Ditch Flow			
				Iron Pipe Set		•		Swale			
				Survey Marker		◐		Catch Basin			
				Property Line Symbol		P		Culvert End Section			
				Same Ownership Symbol (Half Size)		↗		Water Surface Indicator			
				Northwest Quarter Corner (Half Size)		◐		Riprap			
				Section Corner (Half Size)		◐					
				Southeast Quarter Corner (Half Size)		◐					

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**  
(Sheet 2 of 8)

**STANDARD 000001-06**

REVISIONS / REMARKS			
NO.	DESCRIPTION	DATE	BY

amec  
foster  
wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030



**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

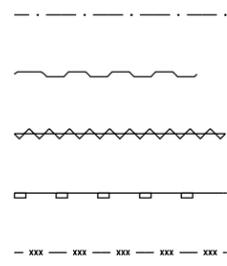
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	26	48

**EROSION & SEDIMENT CONTROL ITEMS**

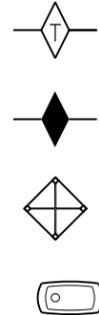
**EX**

**PR**

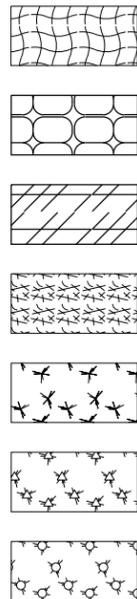
- Cleaning & Grading Limits
- Dike
- Erosion Control Fence
- Perimeter Erosion Barrier
- Temporary Fence



- Ditch Check Temporary
- Ditch Check Permanent
- Inlet & Pipe Protection
- Sediment Basin



- Erosion Control Blanket
- Fabric Formed Concrete Revetment Mat
- Turf Reinforcement Mat
- Mulch Temporary
- Mulch Method 1
- Mulch Method 2 Stabilized
- Mulch Method 3 Hydraulic



**NON-HIGHWAY IMPROVEMENT ITEMS**

**EX**

**PR**

- Noise Attn./Levee
- Field Line
- Fence
- Base of Levee
- Mailbox
- Multiple Mailboxes
- Pay Telephone
- Advertising Sign

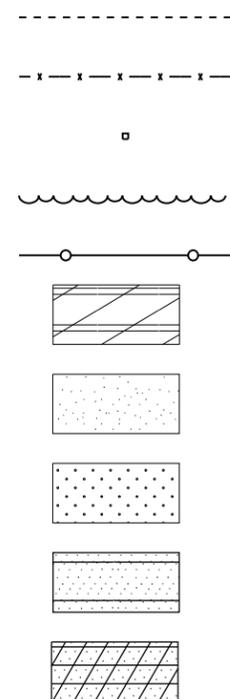


**LANDSCAPING ITEMS**

**EX**

**PR**

- Contour Mounding Line
- Fence
- Fence Post
- Shrubs
- Mowline
- Perennial Plants
- Seeding Class 2
- Seeding Class 2A
- Seeding Class 4
- Seeding Class 4 & 5 Combined

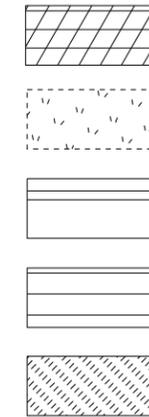


**EXISTING LANDSCAPING ITEMS (contd.)**

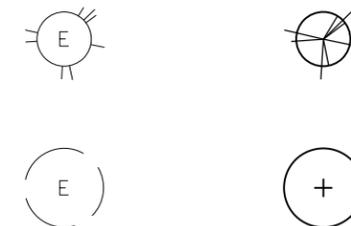
**EX**

**PR**

- Seeding Class 5
- Seeding Class 7
- Seedlings Type 1
- Seedlings Type 2
- Sodding
- Mowstake w/Sign
- Tree Trunk Protection



- Evergreen Tree
- Shade Tree

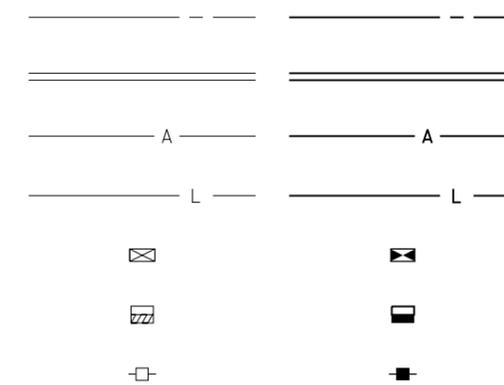


**LIGHTING**

**EX**

**PR**

- Duct
- Conduit
- Electrical Aerial Cable
- Electrical Buried Cable
- Controller
- Underpass Luminaire
- Power Pole



**STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS**

(Sheet 3 of 8)

**STANDARD 00001-06**

REVISIONS / REMARKS				
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		/ /	christopher.stanuch	

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**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	27	48

**LIGHTING  
(contd.)**

**EX**

**PR**

Pull Point		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Unit Comb.		
Electrical Ground		
Traffic Flow Arrow		
High Mast Pole (Half Size)		
Light Unit-1		

**PAVEMENT (MISC.)**

**EX**

**PR**

Keyed Long. Joint	
Keyed Long. Joint w/Tie Bars	
Sawed Long. Joint w/Tie Bars	
Bituminous Shoulder	
Bituminous Taper	
Stabilized Driveway	
Widening	

**PAVEMENT MARKINGS**

**EX**

**PR**

Bike Lane Symbol		
Bike Lane Text		
Handicap Symbol		
RR Crossing		
Raised Marker Amber 1 Way		
Raised Marker Amber 2 Way		
Raised Marker Crystal 1 Way		
Two Way Turn Left		
Shoulder Diag. Pattern		
Skip-Dash White		
Skip-Dash Yellow		
Stop Line		
Solid Line		
Double Centerline		
Dotted Lines		
CL 2Ln 2Way RRPM 12.2 m (40') o.c.		
CL 2Ln 2Way RRPM 80' (24.4 m) o.c.		
CL Multilane Div. RRPM 40' (12.2 m) o.c.		
CL Multilane Div. RRPM 80' (24.4 m) o.c.		
CL Multilane Div. Dbl. RRPM 80' (24.4 m) o.c.		
CL Multilane Undiv.		
Two Way Turn Left Line		

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**

(Sheet 4 of 8)

**STANDARD 000001-06**

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		/ /		christopher.stanuch

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LakeCounty  
Division of Transportation

**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	28	48

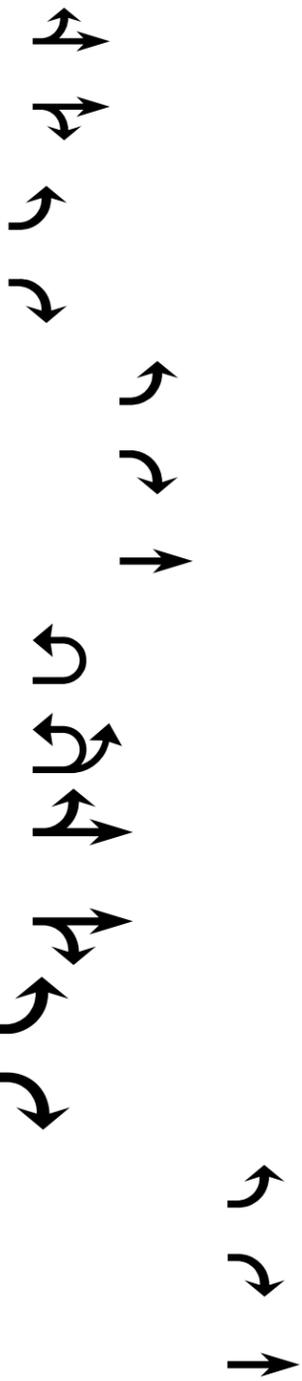
**PAVEMENT MARKINGS**  
**(contd.)**

- Urban Combination Left
- Urban Combination Right
- Urban Left Turn Arrow
- Urban Right Turn Arrow
- Urban Left Turn Only
- Urban Right Turn Only
- Urban Thru Only
- Urban U-Turn
- Urban Combined U-Turn
- Rural Combination Left
- Rural Combination Right
- Rural Left Turn Arrow
- Rural Right Turn Arrow
- Rural Left Turn Only
- Rural Right Turn Only
- Rural Thru Only

**EX**



**PR**



ONLY ONLY ONLY

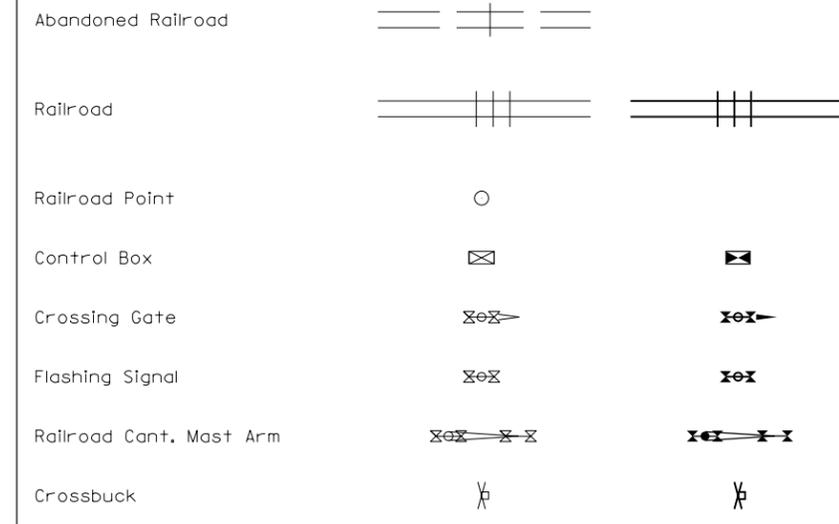
ONLY ONLY ONLY

ONLY ONLY ONLY

**RAILROAD ITEMS**

**EX**

**PR**



**REMOVAL ITEMS**

**EX**

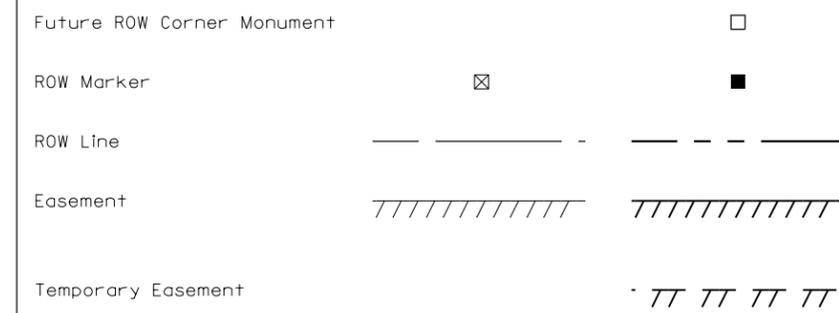
**PR**



**RIGHT OF WAY ITEMS**

**EX**

**PR**



**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**

(Sheet 5 of 8)

**STANDARD 000001-06**

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
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		/ /		CRS/TC
		/ /		PLOTTED BY: christopher.stanuch

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**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	29	48

**RIGHT OF WAY ITEMS**  
**(contd.)**

	<b>EX</b>	<b>PR</b>
Access Control Line	— AC —————	— AC —————
Access Control Line & ROW	— AC —————	— AC —————
Access Control Line & ROW with Fence	— x ————— AR —	— x ————— AC —
Excess ROW Line		— XS —————

**ROADWAY PLAN ITEMS**

	<b>EX</b>	<b>PR</b>
Cable Barrier	— □ — □ — □ — □ — □ —	— ■ — ■ — ■ — ■ — ■ —
Concrete Barrier	— — — — —	— — — — —
Edge of Pavement	— — — — —	— — — — —
Bit Shoulders, Medians and C&G Line	— — — — —	— — — — —
Aggregate Shoulder		— — — — —
Sidewalks, Driveways	— — — — —	— — — — —
Guardrail	— □ — □ — □ — □ — □ —	— ■ — ■ — ■ — ■ — ■ —
Guardrail Post	□	
Traffic Sign	⊥	⊥
Corrugated Median	▤▤▤▤▤▤▤▤▤▤	▤▤▤▤▤▤▤▤▤▤
Impact Attenuator		⊙⊙⊙⊙⊙⊙⊙⊙⊙⊙
North Arrow with District Office (Half Size)		
Match Line		— STA. 45+00 —
Slope Limit Line	— — — — —	
Typical Cross-Section Line	— — — — —	— — — — —

**ROADWAY PROFILES**

	<b>EX</b>	<b>PR</b>
P.I. Indicator	▲	▲
Point Indicator	○	○
Earthworks Balance Point		◐
Begin Point		◑
Vert. Curve Data	VPI = ELEV = L E =	VPI = ELEV = L E =
Ditch Profile Left Side	— — — — —	— — — — —
Ditch Profile Right Side	— — — — —	— — — — —
Roadway Profile Line	— — — — —	— — — — —
Storm Sewer Profile Left Side	— — — — —	— — — — —
Storm Sewer Profile Right Side	— — — — —	— — — — —

**SIGNING ITEMS**

	<b>EX</b>	<b>PR</b>
Cone, Drum or Barricade	○	○
Barricade Type II		▨
Barricade Type III		⊥
Barricade With Edge Line		— ○ — ○ — ○ —
Flashing Light Sign		○
Panels I		▨
Panels II		▨
Direction of Traffic		➡
Sign Flag (Half Size)		◊

**SIGNING ITEMS**  
**(contd.)**

	<b>EX</b>	<b>PR</b>
Reverse Left W1-4L (Half Size)		◊
Reverse Right W1-4R (Half Size)		◊
Two Way Traffic Sign W6-3 (Half Size)		◊
Detour Ahead W20-2(0) (Half Size)		◊
Left Lane Closed Ahead W20-5L(0) (Half Size)		◊
Right Lane Closed Ahead W20-5R(0) (Half Size)		◊
Road Closed Ahead W20-3(0) (Half Size)		◊
Road Construction Ahead W20-1(0) (Half Size)		◊
Single Lane Ahead (Half Size)		◊
Transition Left W4-2L (Half Size)		◊
Transition Right W4-2R (Half Size)		◊

**STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS**

(Sheet 6 of 8)

**STANDARD 000001-06**

REVISIONS / REMARKS				
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		/ /		6/23/2016
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8745 W. Higgins Road Suite 300  
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(773) 693-6030

LakeCounty  
Division of Transportation

**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	30	48

**SIGNING ITEMS**  
**(contd.)**

One Way Arrow Lrg. W1-6-(0)  
(Half Size)

**EX**

**PR**



Two Way Arrow Large W1-7-(0)  
(Half Size)



Detour M4-10L-(0)  
(Half Size)



Detour M4-10R-(0)  
(Half Size)



One Way Left R6-1L  
(Half Size)



One Way Right R6-1R  
(Half Size)



Left Turn Lane R3-1100L  
(Half Size)



Keep Left R4-7AL  
(Half Size)



Keep Left R4-7BL  
(Half Size)



Keep Right R4-7AR  
(Half Size)



Keep Right R4-7BR  
(Half Size)



Stop Here On Red R10-6-AL  
(Half Size)



Stop Here On Red R10-6-AR  
(Half Size)



No Left Turn R3-2  
(Half Size)



No Right Turn R3-1  
(Half Size)



Road Closed R11-2  
(Half Size)



Road Closed Thru Traffic R11-2  
(Half Size)



**STRUCTURES ITEMS**

**EX**

**PR**

Box Culvert Barrel



Box Culvert Headwall



Bridge Pier



Bridge



Retaining Wall



Temporary Sheet Piling



**TRAFFIC SHEET ITEMS**

**EX**

**PR**

Cable Number



Left Turn Green



Left Turn Yellow



Signal Backplate



Signal Section 8" (200 mm)



Signal Section 12" (300 mm)



Walk/Don't Walk Letters



Walk/Don't Walk Symbols



**TRAFFIC SIGNAL ITEMS**

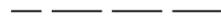
**EX**

**PR**

Galv. Steel Conduit



Underground Cable



Detector Loop Line



Detector Loop Large



Detector Loop Small



Detector Loop Quadrapole



**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**

(Sheet 7 of 8)

**STANDARD 000001-06**

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	6/23/2016
NO.	DESCRIPTION	/ /		DSGNER/CHECKED BY:	CRS/TC
		/ /		PLOTTED BY:	christopher.stanuch

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**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**

**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	31	48

<b>TRAFFIC SIGNAL ITEMS (contd.)</b>	<b>EX</b>	<b>PR</b>
Detector Raceway		
Aluminum Mast Arm		
Steel Mast Arm		
Veh. Detector Magnetic		
Conduit Splice		
Controller		
Gulfbox Junction		
Wood Pole		
Temp. Signal Head		
Handhole		
Double Handhole		
Heavy Duty Handhole		
Junction Box		
Ped. Pushbutton Detector		
Ped. Signal Head		
Power Pole Service		
Priority Veh. Detector		
Signal Head		
Signal Head w/Backplate		
Signal Post		
Closed Circuit TV		
Video Detector System		

<b>UNDERGROUND UTILITY ITEMS</b>	<b>EX</b>	<b>PR</b>	<b>ABANDONED</b>
Cable TV			
Electric Cable			
Fiber Optic			
Gas Pipe			
Oil Pipe			
Sanitary Sewer			
Telephone Cable			
Water Pipe			

<b>UTILITIES ITEMS</b>	<b>EX</b>	<b>PR</b>
Controller		
Double Handhole		
Fire Hydrant		
GuyWire or Deadman Anchor		
Handhole		
Heavy Duty Handhole		
Junction Box		
Light Pole		
Manhole		
Pipeline Warning Sign		
Power Pole		
Power Pole with Light		
Sanitary Sewer Cleanout		
Splice Box Above Ground		
Telephone Splice Box Above Ground		
Telephone Pole		

<b>UTILITY ITEMS (contd.)</b>	<b>EX</b>	<b>PR</b>
Traffic Signal		
Traffic Signal Control Box		
Water Meter		
Water Meter Valve Box		
Profile Line		
Aerial Power Line		

<b>VEGETATION ITEMS</b>	<b>EX</b>	<b>PR</b>
Deciduous Tree		
Bush or Shrub		
Evergreen Tree		
Stump		
Orchard/Nursery Line		
Vegetation Line		
Woods & Bush Line		

<b>WATER FEATURE ITEMS</b>	<b>EX</b>	<b>PR</b>
Stream or Drainage Ditch		
Waters Edge		
Water Surface Indicator		
Water Point		
Disappearing Ditch		
Marsh		
Marsh/Swamp Boundary		

**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**  
(Sheet 8 of 8)  
**STANDARD 000001-06**

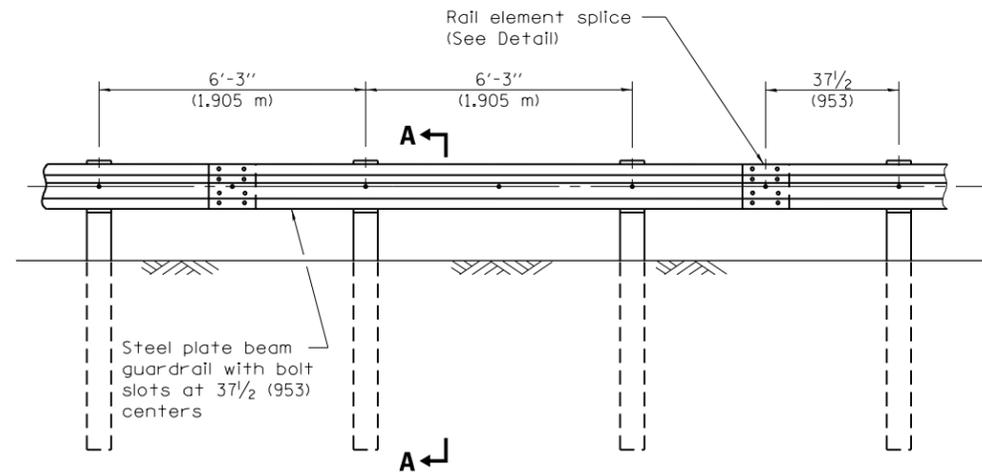
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NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		6/23/2016
		/ /		CRS/TC
		/ /		christopher.stanuch

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**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

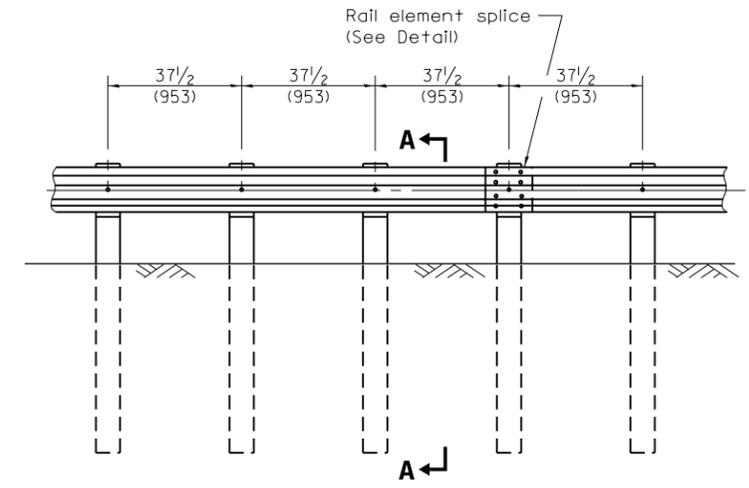
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	32	48



**ELEVATION**

**TYPE A**

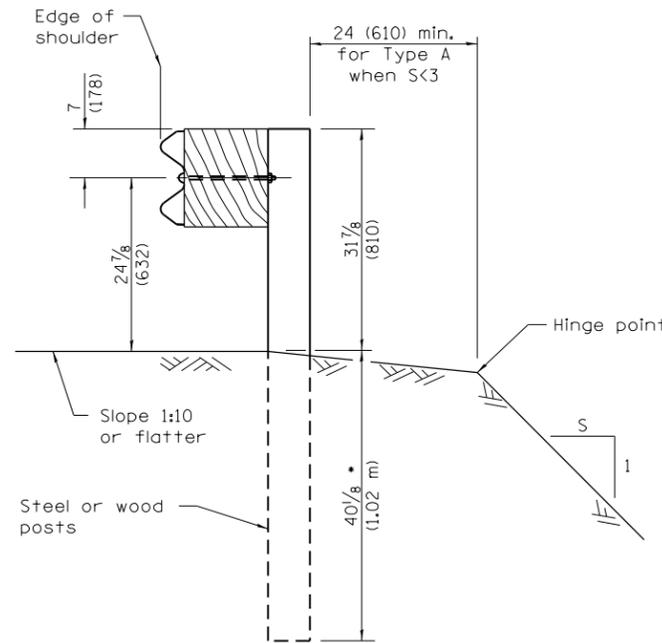
6'-3" (1.905 m) Typical post spacing



**ELEVATION**

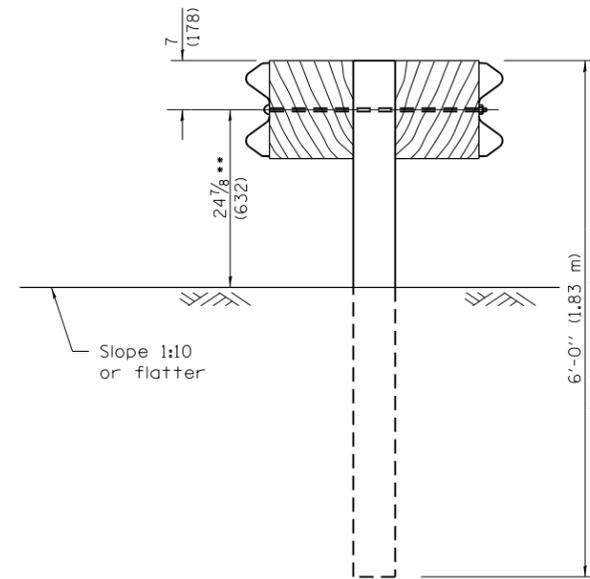
**TYPE B**

37 1/2 (953) Closed post spacing



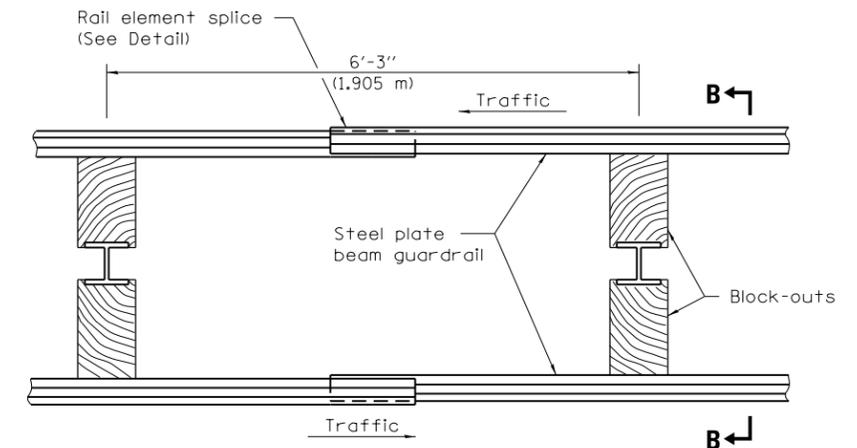
**SECTION A-A**

- When "S" is less than 3 and the distance from the back of post is less than 24 (610), the post shall be steel and the embedment shall be 76 7/8 (1934).



**SECTION B-B**

- When connecting Type D guardrail to an impact attenuator, adjust this dimension to 21 7/8 (556) over a distance of 25'-0" (7.62 m) from point of connection.



**PLAN**

**TYPE D**

Double steel plate beam guardrail  
6'-3" (1.905 m) typical post spacing

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation	
PASSED	January 1, 2012
Michael Brand ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2012
Scott Schick ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-17

DATE	REVISIONS
1-1-12	Added req. for 9 ft. posts to be steel. Modified set back of g'rail behind curb.
1-1-11	Added note to Section B-B for conn. to impact att.
	Revised table on Sheet 4.

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 1 of 4)

**STANDARD 630001-10**

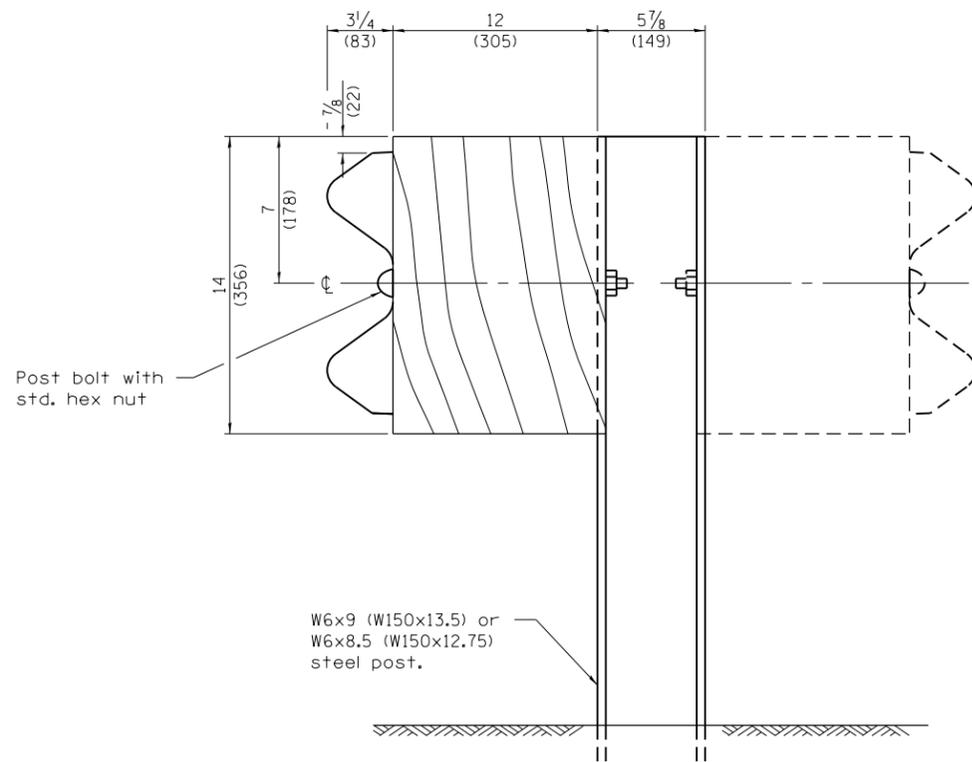
NO.	DESCRIPTION	DATE	BY	PLT DATE	6/23/2016
				DSG NR/CHECKED BY:	JAN/TC
				PLOTTED BY:	christopher.stanuch

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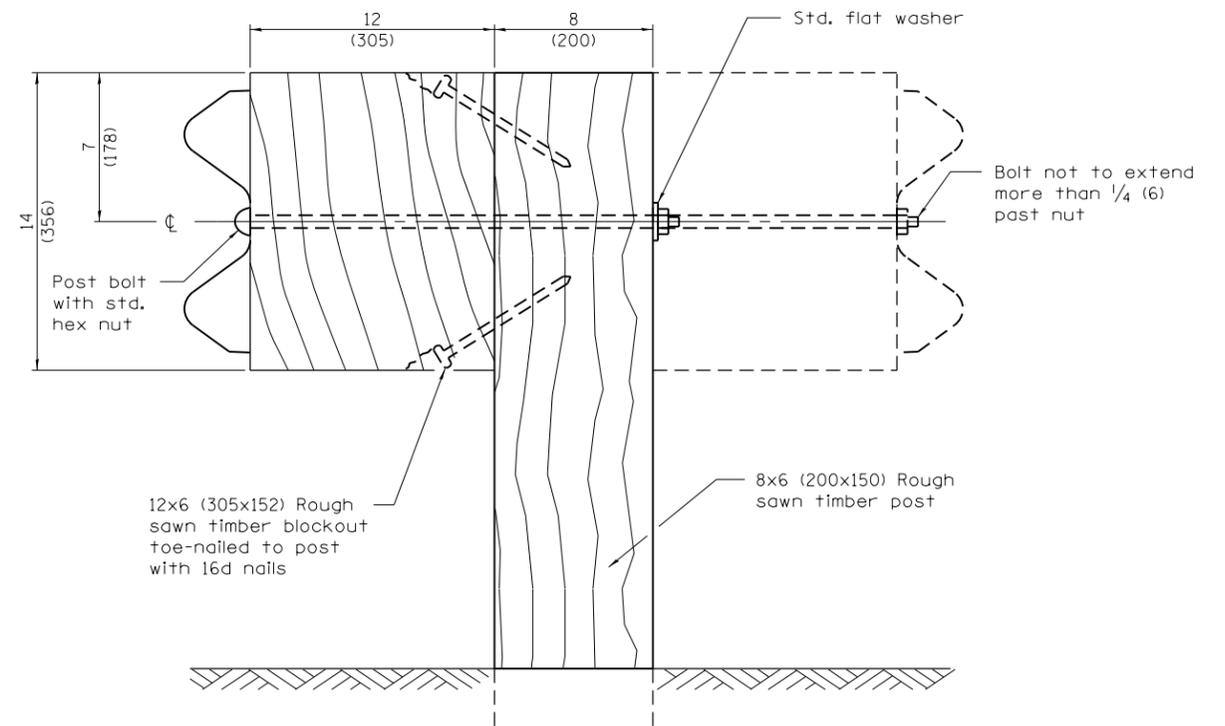


**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

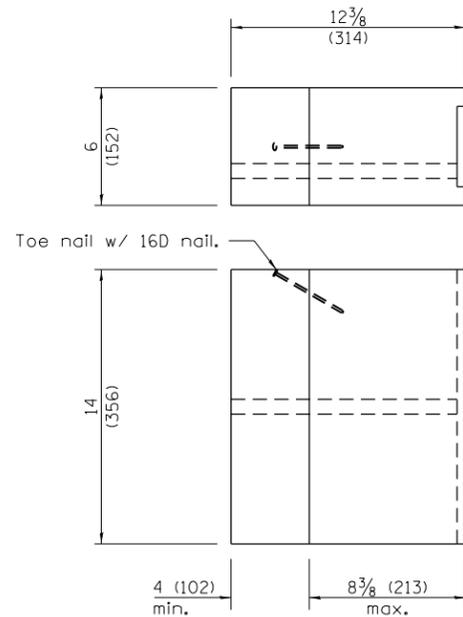
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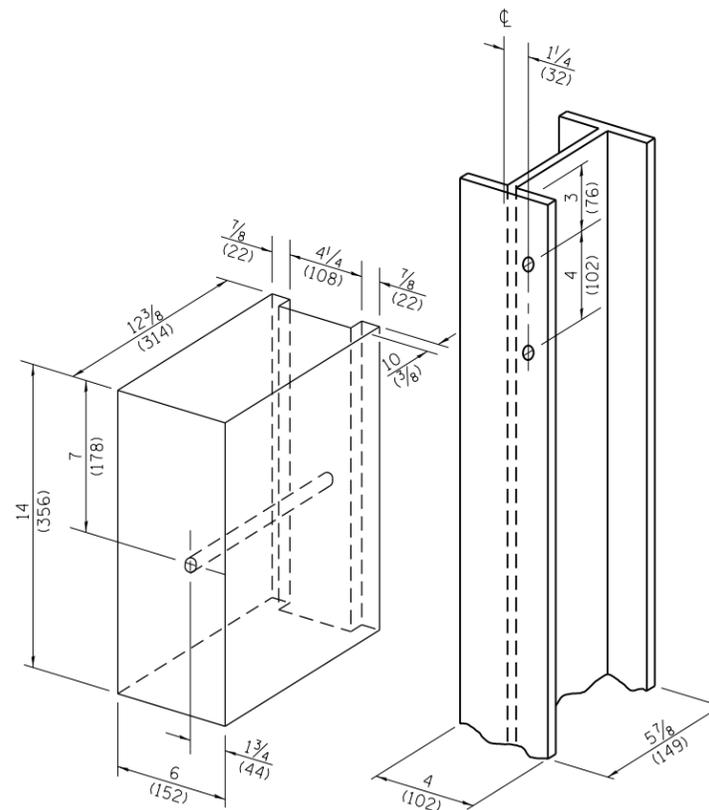
**STEEL POST CONSTRUCTION**



**WOOD POST CONSTRUCTION**

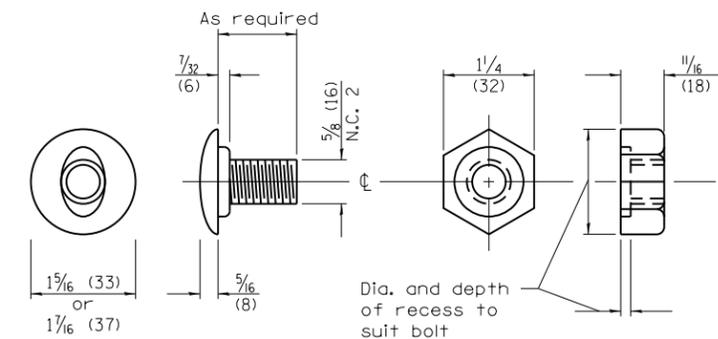


**TWO-PIECE WOOD BLOCKOUT OPTION**



Note:  
All holes 3/4 (20) dia.

**WOOD BLOCK-OUT AND STEEL POST DETAILS**



**POST OR SPLICE BOLT & NUT**

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 2 of 4)

**STANDARD 630001-10**

Illinois Department of Transportation	
PASSED	January 1, 2012
Michael Brand ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2012
Scott Schick ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	16-1-1-97

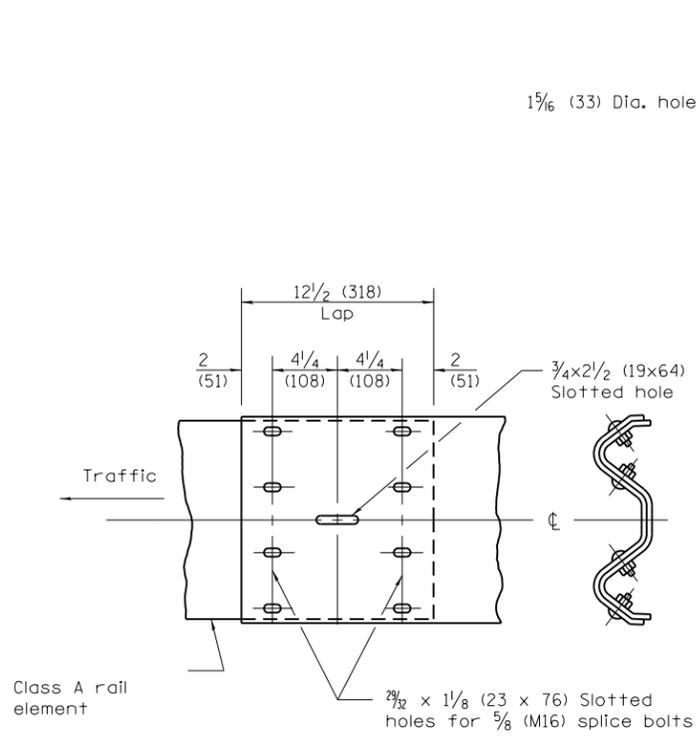
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NO.	DESCRIPTION	DATE	BY	DSGNER/CHECKED BY:	JAN/TC
				PLOTTED BY:	christopher.stanuch

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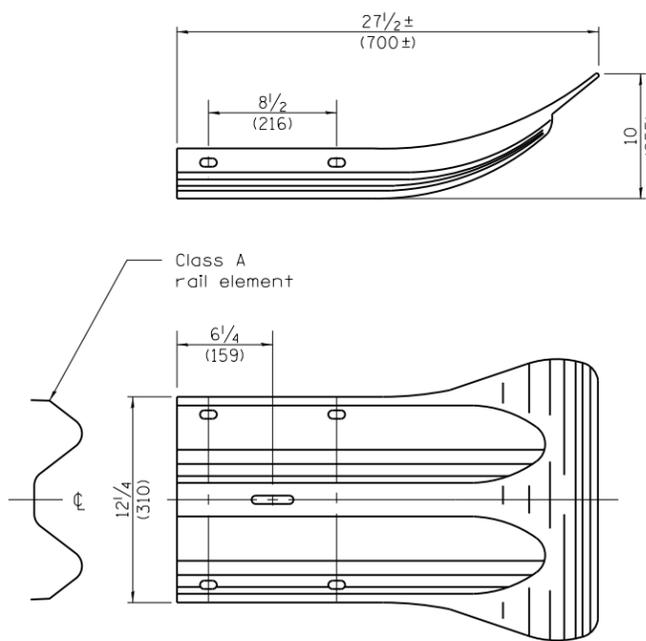
LakeCounty  
Division of Transportation

ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS  
IDOT HIGHWAY STANDARDS

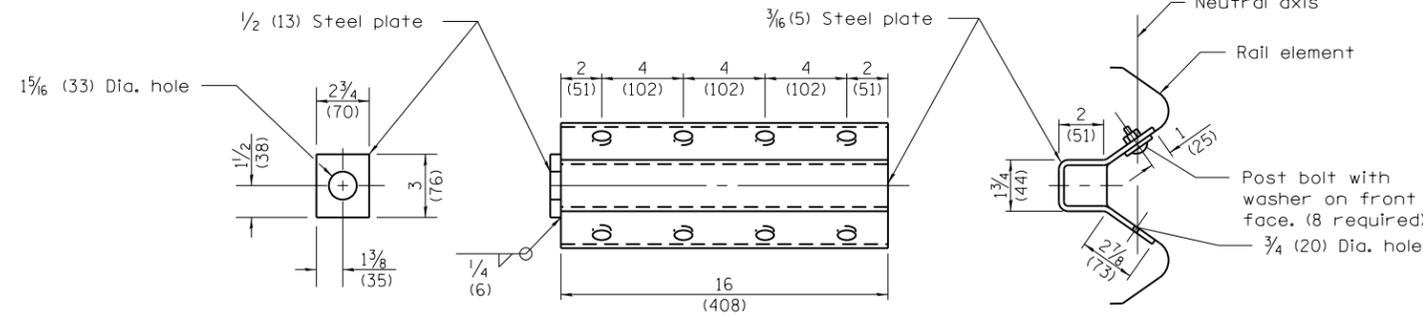
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	34	48



**RAIL ELEMENT SPLICE**

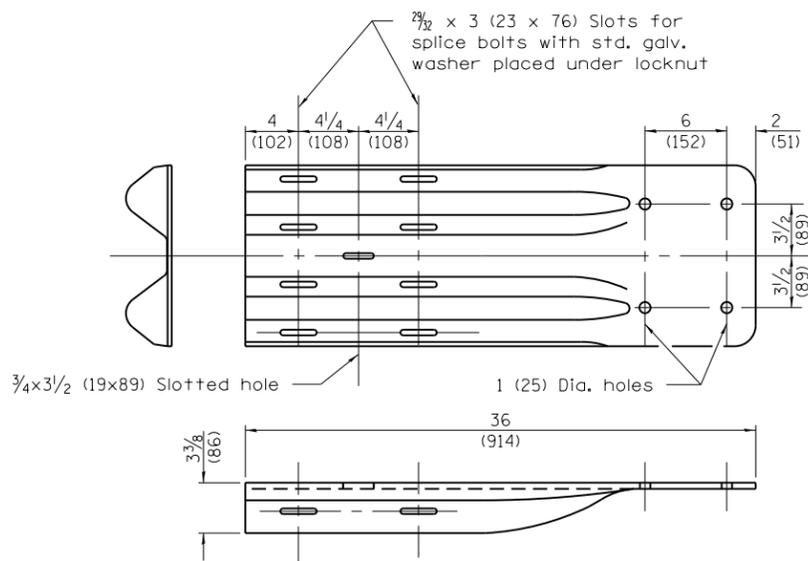


**END SECTION**



NOTE  
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

**ANCHOR PLATE T DETAILS**

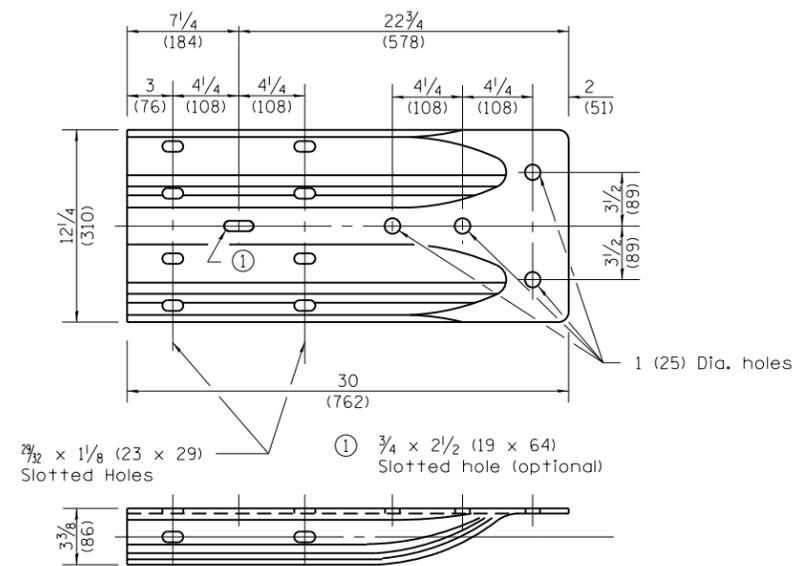


NOTE  
When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

**END SHOE**



**ALTERNATE END SHOE**

**STEEL PLATE BEAM  
GUARDRAIL**

(Sheet 3 of 4)

**STANDARD 630001-10**

PASSED	January 1, 2012
 ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2012
 ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-97

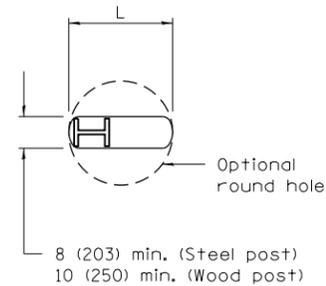
REVISIONS / REMARKS		DATE	BY	PLT DATE	6/23/2016
NO.	DESCRIPTION	/ /	/ /	DSGNR/CHECKED BY	JAN/TC
		/ /	/ /	PLOTTED BY	christopher.stanuch

amec  
foster  
wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030

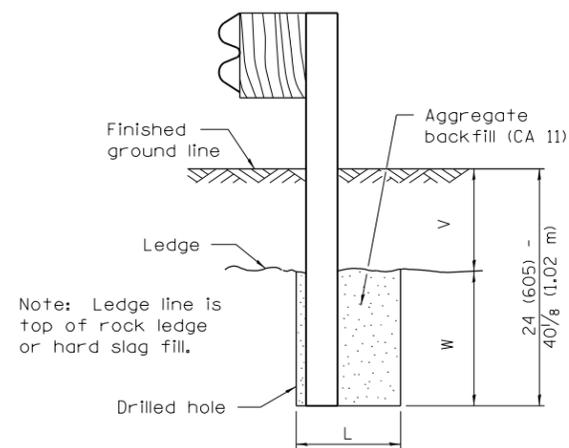


**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	35	48

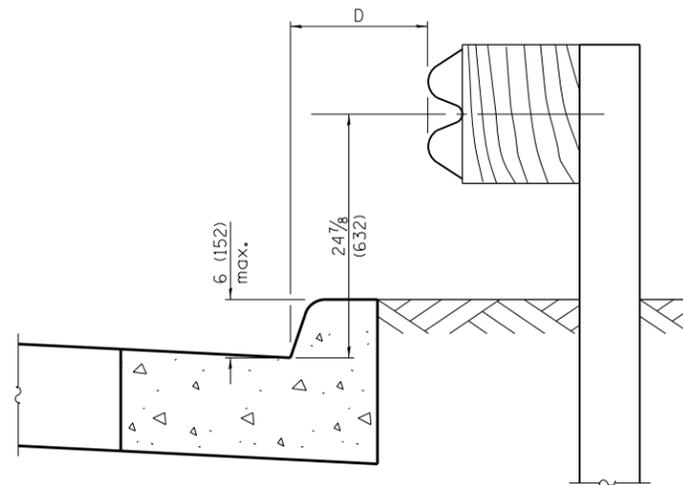


**PLAN**

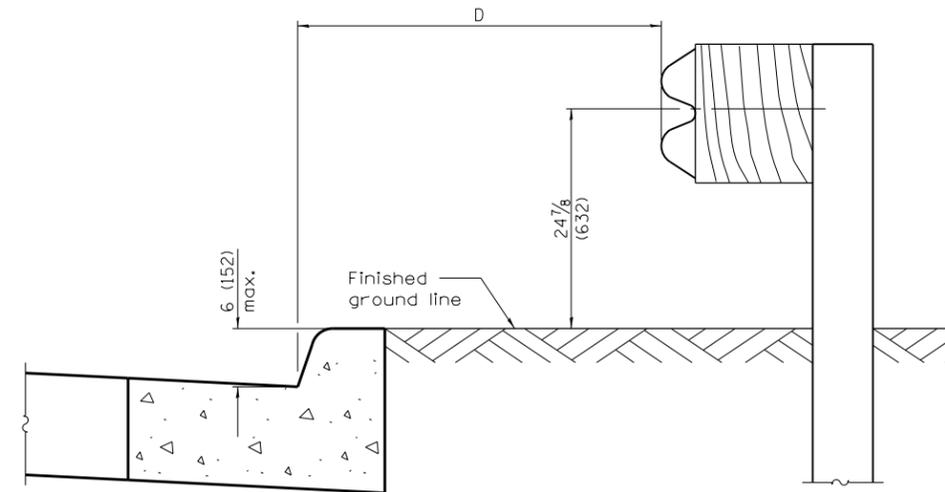


**ELEVATION**

**FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED**



**0 ≤ D < 4'-0" (1.2 m)**

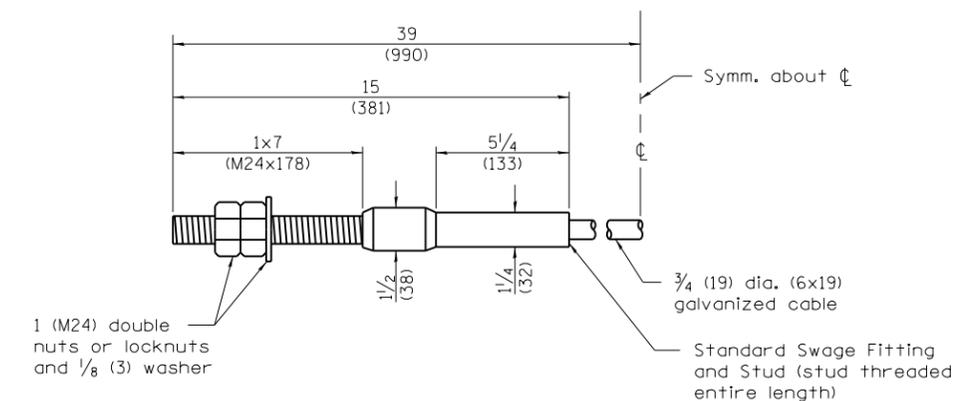


**4'-0" (1.2 m) ≤ D ≤ 12'-0" (3.7 m)**

**GUARDRAIL PLACED BEHIND CURB**

Note: 'D' shall not exceed 6 (152) for design speeds greater than 45 mph.

V	W	L	
		Steel Post	Wood Post
0 - 6 (0 - 152)	24 (610)	21 (530)	23 (580)
> 6 - 18 (> 152 - 458)	18 (458)	14 1/2 (368)	16 1/2 (419)
> 18 - 31 (> 458 - 787)	12 (305)	8 (203)	10 (250)
> 31 - 40 7/8 (> 787 - 1.02 m)	12 - 0 (305 - 0)	8 (203)	10 (250)



**CABLE ASSEMBLY**

(40,000 lbs. (18,100 kg) min. breaking strength)  
Tighten to taut tension.

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 4 of 4)

**STANDARD 630001-10**

Illinois Department of Transportation

PASSED January 1, 2012  
Michael Brand  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2012  
Scott Schick  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

NO.	DESCRIPTION	DATE	BY	PLOT DATE:	6/23/2016
		/ /		DSGMR/CHECKED BY:	JAN/TC
		/ /		PLOTTED BY:	christopher.stanuch

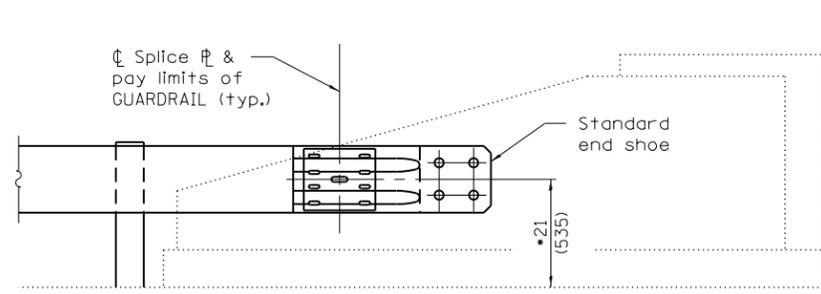
amec foster wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030

LakeCounty  
Division of Transportation

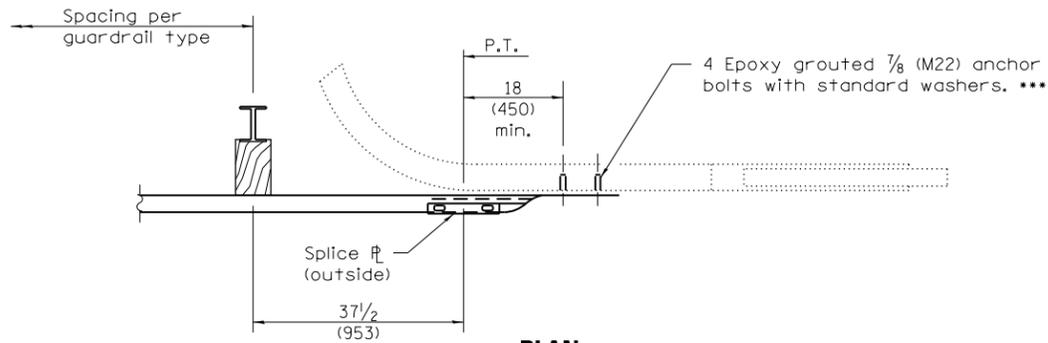
ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS  
IDOT HIGHWAY STANDARDS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	36	48

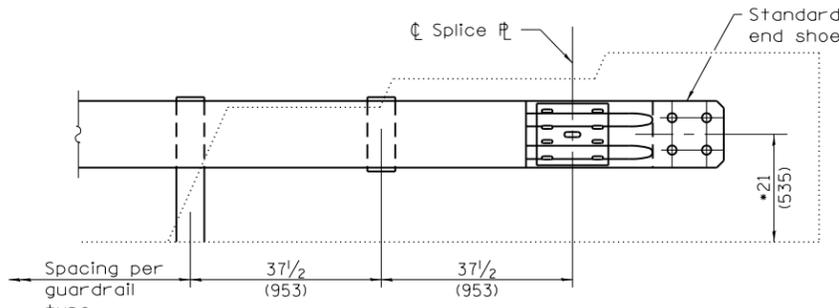




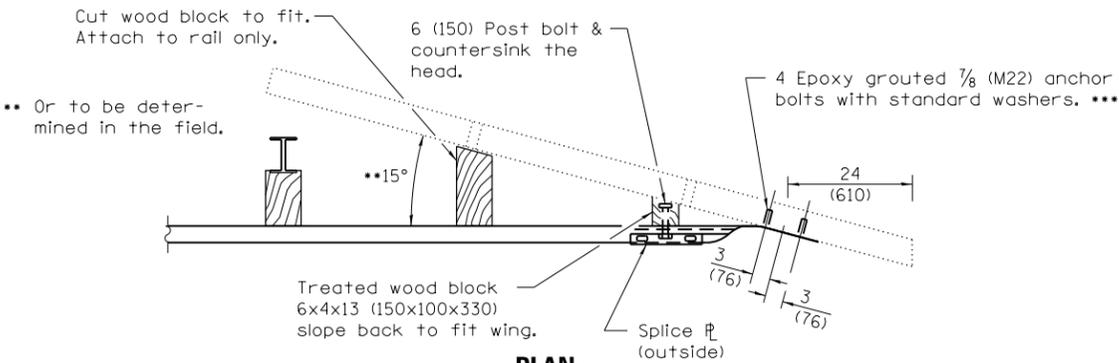
**ELEVATION**



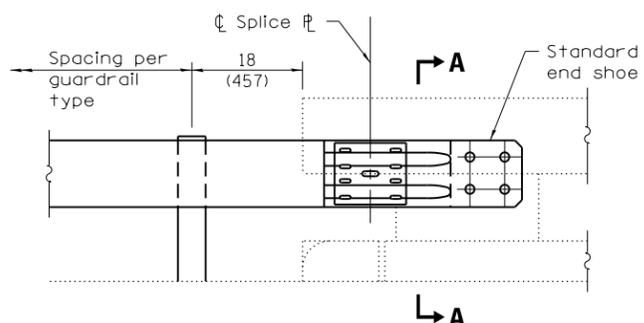
**PLAN  
CURVED WING**



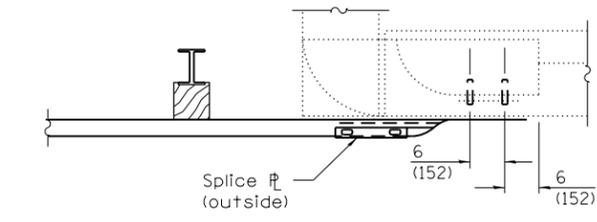
**ELEVATION**



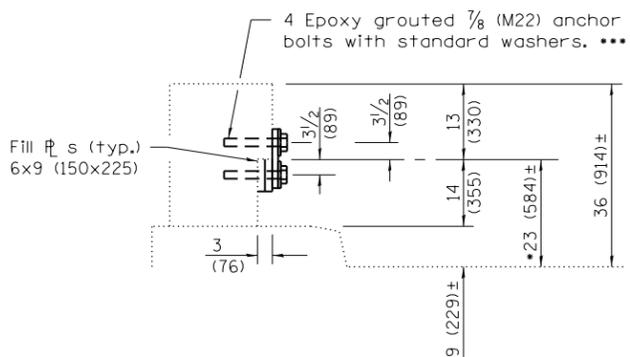
**PLAN  
FLARED WING**



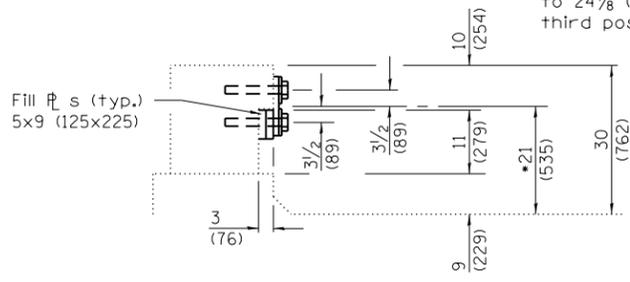
**ELEVATION**



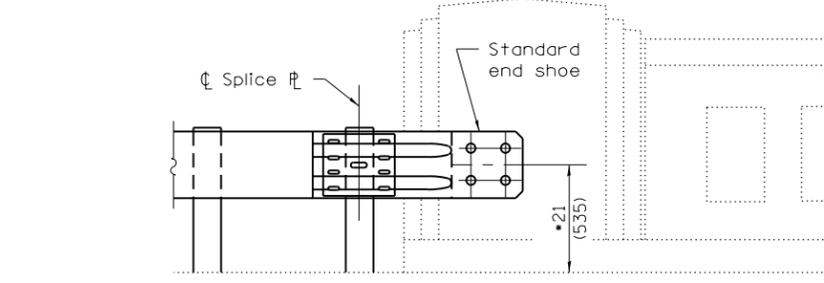
**PLAN**



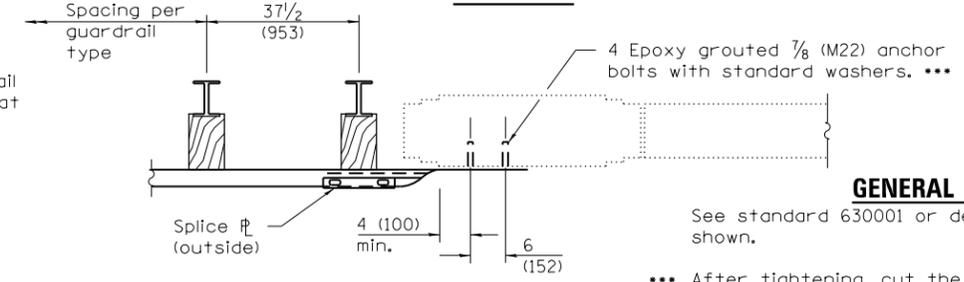
**SECTION A-A  
(HIGH RAIL)**



**SECTION A-A  
(LOW RAIL)**



**ELEVATION**



**PLAN  
CONCRETE HANDRAIL**

**GENERAL NOTES**

See standard 630001 or details of guardrail not shown.  
 \*\*\* After tightening, cut the anchor bolts flush with nuts, and damage the bolt head to prevent it from loosening.  
 All dimensions are in inches (millimeters) unless otherwise shown.

PASSED	January 1, 2009
ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-97

**REINFORCED CONCRETE HANDRAIL**

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
				6/23/2016
				JAN/TC
				christopher.stanuch

amec  
 foster  
 wheeler  
 8745 W. Higgins Road Suite 300  
 Chicago, IL 60631  
 (773) 693-6030

Lake County  
 Division of Transportation

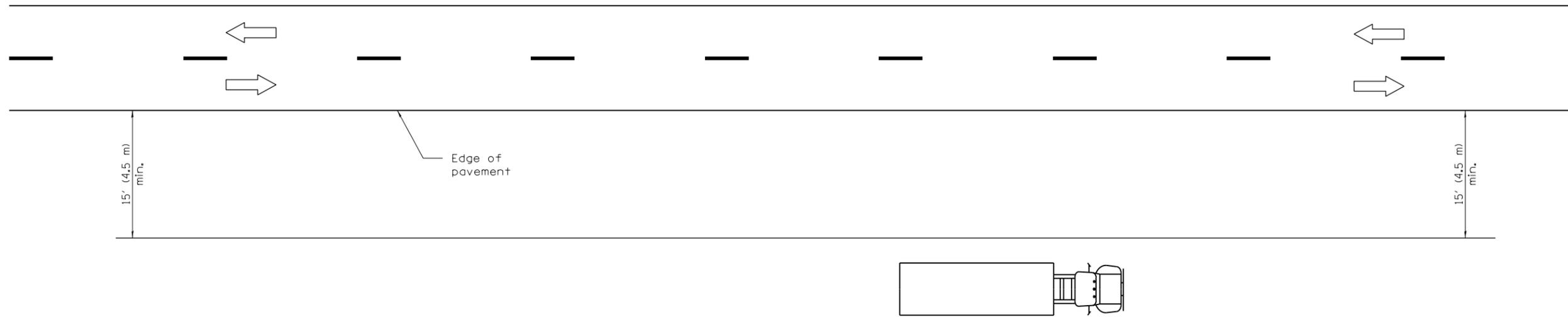
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-07	Changes adopted to implement the Midwest Guardrail System.

**TRAFFIC BARRIER  
 TERMINAL, TYPE 10**

**STANDARD 631046-04**

**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	38	48



**TYPICAL APPLICATIONS**

- Landscaping work
- Utility work
- Fencing contracts and maintenance
- Cleaning culverts

**GENERAL NOTES**

This Standard is used where at all times all vehicles, equipment, workers or their activities are more than 15' (4.5 m) from the edge of pavement.

When the work operation requires that two or more work vehicles cross the 15' (4.5 m) clear zone in any one hour, traffic control shall be according to Standard 701006.

All dimensions are in inches (millimeters) unless otherwise shown.

APPROVED	January 1, 2009
ENGINEER OF OPERATIONS	
APPROVED	January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-97

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-05	Revised title and notes.

**OFF-RD OPERATIONS,  
2L, 2W, MORE THAN  
15' (4.5 m) AWAY**

**STANDARD 701001-02**

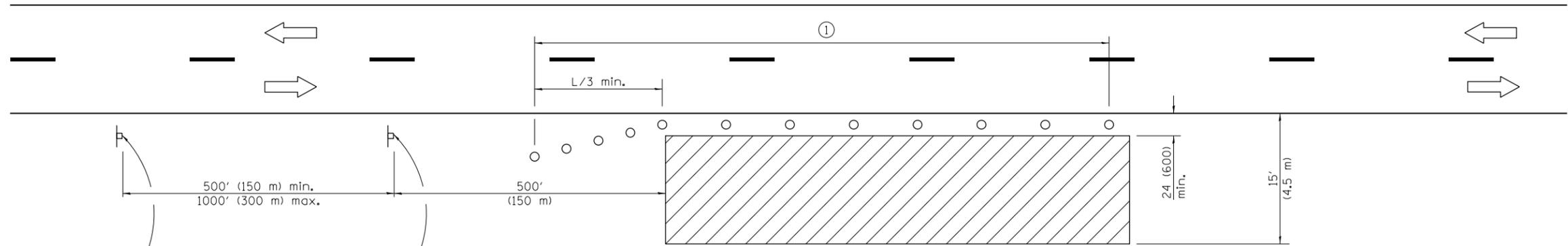
NO.	DESCRIPTION	DATE	BY	PLOT DATE:	6/23/2016
		/ /		DSGNR/CHECKED BY:	JAN/TC
		/ /		PLOTTED BY:	christopher.stanuch

8745 W. Higgins Road Suite 300  
 Chicago, IL 60631  
 (773) 693-6030

LakeCounty  
 Division of Transportation

**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	39	48



For contract construction projects



W20-1103(0)-48



W21-1(0)-48

For maintenance and utility projects



W20-1(0)-48

**TYPICAL APPLICATIONS**

- Utility operations
- Culvert extensions
- Side slope changes
- Guardrail installation and maintenance
- Delineator installation
- Landscaping operations
- Shoulder repair
- Sign installation and maintenance

**SYMBOLS**

- Work area
- Sign
- Cone, drum or barricade

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

**GENERAL NOTES**

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24' (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	English	(Metric)
40 mph (70 km/h) or less:	$L = \frac{WS^2}{60}$	$L = \frac{WS^2}{150}$
45 mph (80 km/h) or greater:	$L = (W)(S)$	$L = 0.65(W)(S)$

W = Width of offset in feet (meters).  
S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

**OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE**

**STANDARD 701006-05**

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

Illinois Department of Transportation

APPROVED January 1, 2014  
ENGINEER OF SAFETY ENGINEERING

APPROVED January 1, 2014  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

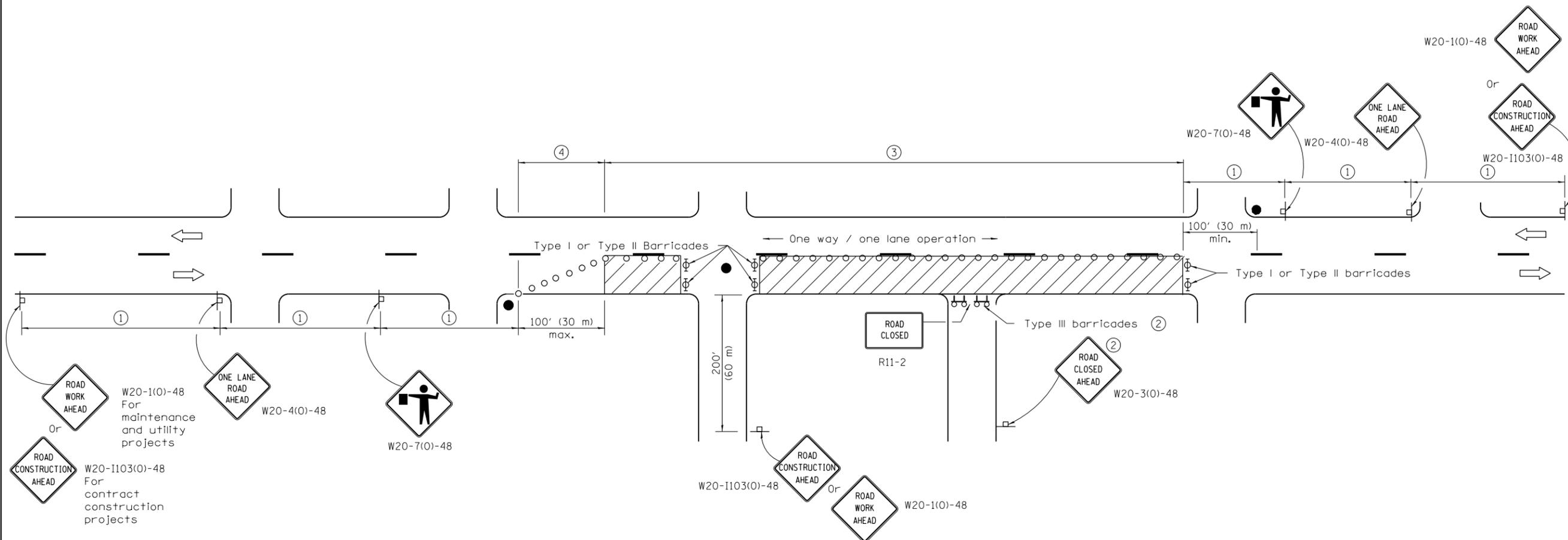
NO.	DESCRIPTION	DATE	BY	PLT DATE
				6/23/2016
			JAN/TC	
			christopher.stanuch	

amec foster wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030



**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	40	48



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

**SYMBOLS**

- Work area
- Cone, drum or barricade (not required for moving operations)
- Sign on portable or permanent support
- Flagger with traffic control sign
- Barricade or drum with flashing light
- Type III barricade with flashing lights

- ① Refer to SIGN SPACING TABLE for distances.
- ② For approved sideroad closures.
- ③ Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
- ④ Cones, drums or barricades at 20' (6 m) centers.

**GENERAL NOTES**

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement requiring the closure of one traffic lane in an urban area.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation

APPROVED January 1, 2011  
  
 ENGINEER OF SAFETY ENGINEERING

ISSUED 1-1-97

APPROVED January 1, 2011  
  
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to English (metric). Corrected sign No.'s.

**URBAN LANE CLOSURE,  
2L, 2W, UNDIVIDED**

**STANDARD 701501-06**

REVISIONS / REMARKS	
NO.	DESCRIPTION

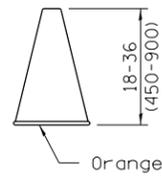
amec foster wheeler  
 8745 W. Higgins Road Suite 300  
 Chicago, IL 60631  
 (773) 693-6030



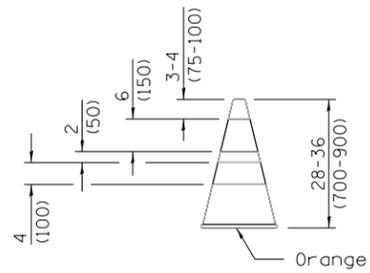
**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**

**IDOT HIGHWAY STANDARDS**

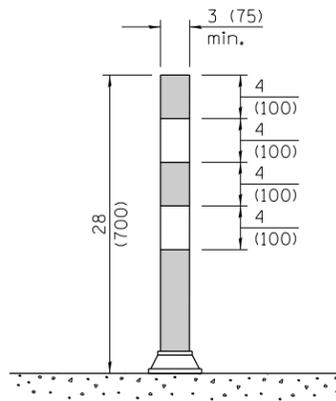
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	41	48



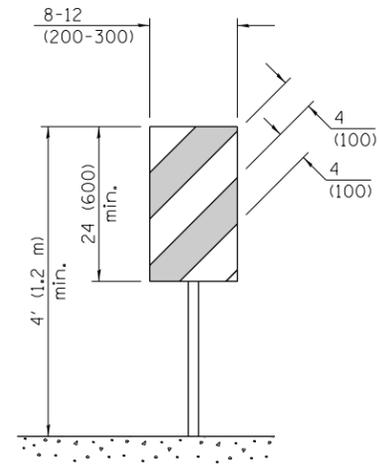
**CONE**



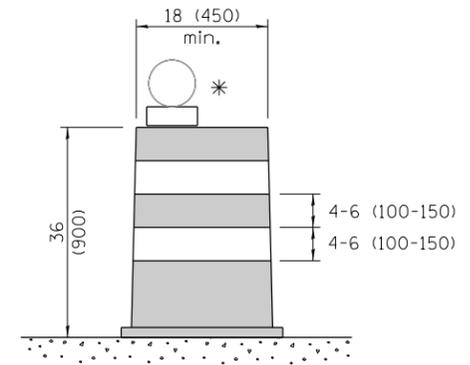
**REFLECTORIZED CONE**



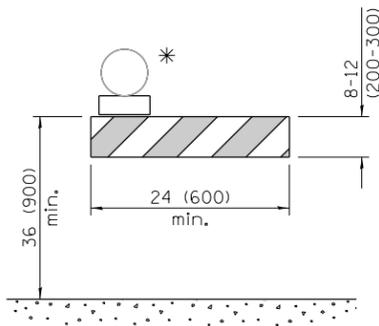
**FLEXIBLE DELINEATOR**



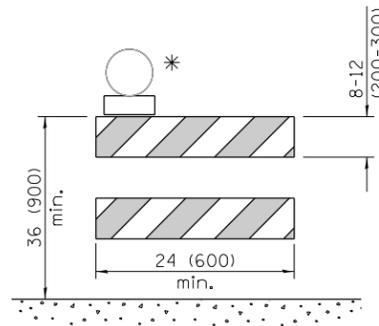
**VERTICAL PANEL  
POST MOUNTED**



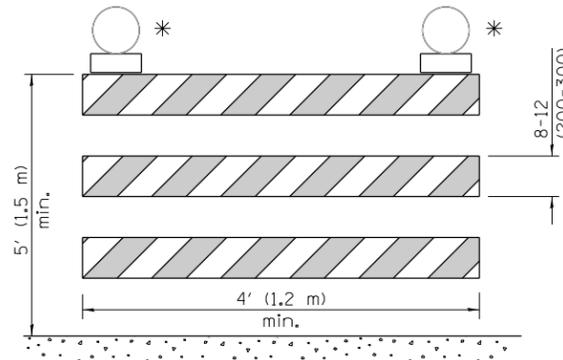
**DRUM**



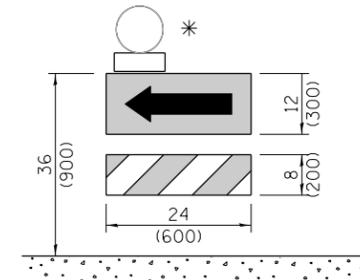
**TYPE I BARRICADE**



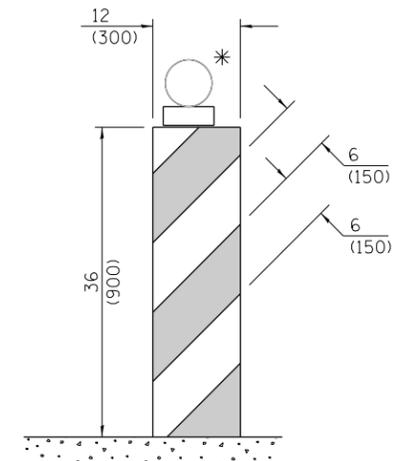
**TYPE II BARRICADE**



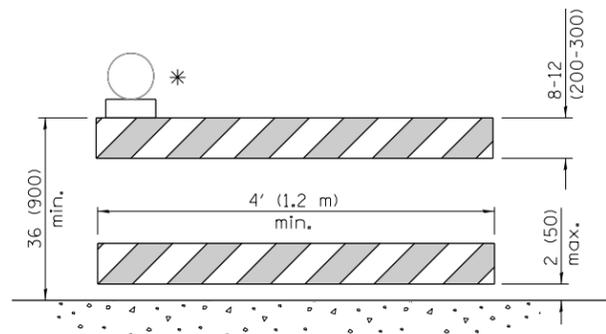
**TYPE III BARRICADE**



**DIRECTION INDICATOR  
BARRICADE**



**VERTICAL BARRICADE**



**DETECTABLE PEDESTRIAN  
CHANNELIZING BARRICADE**

\* Warning lights (if required)

**GENERAL NOTES**

All heights shown shall be measured above the pavement surface.

All dimensions are in inches (millimeters) unless otherwise shown.

**TRAFFIC CONTROL  
DEVICES**

(Sheet 1 of 3)

**STANDARD 701901-03**

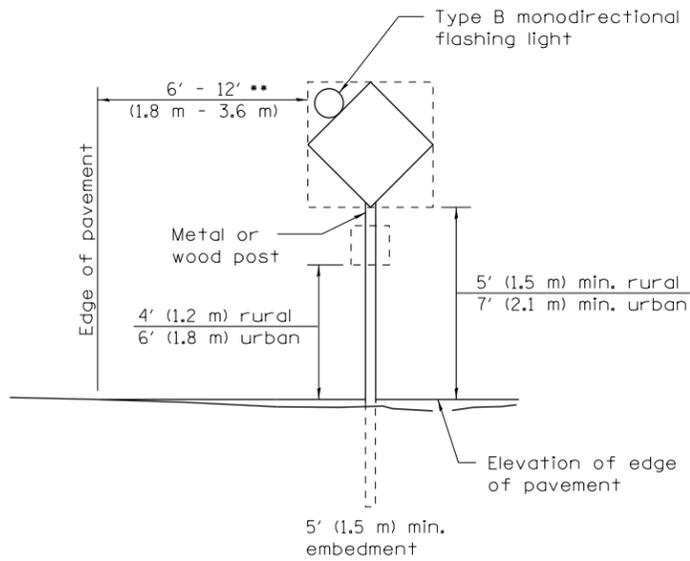
REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		6/23/2016
		/ /		TC/JAN
		/ /		christopher.stanuch

amec  
foster  
wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030



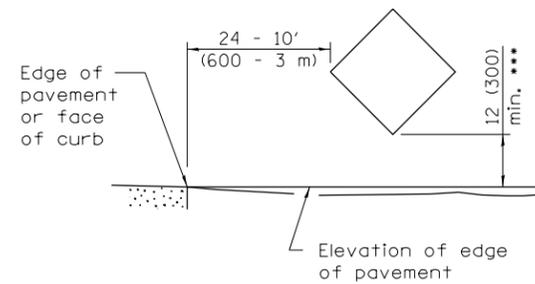
**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	42	48



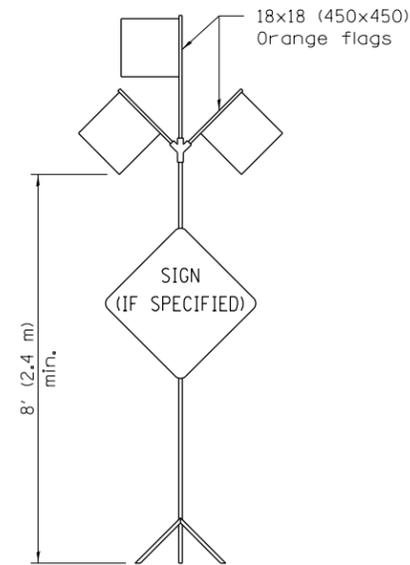
**POST MOUNTED SIGNS**

\*\* When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



**SIGNS ON TEMPORARY SUPPORTS**

\*\*\* When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



**HIGH LEVEL WARNING DEVICE**

ROAD CONSTRUCTION NEXT X MILES

END CONSTRUCTION

G20-1(0)-6036

G20-2a(0)-6024

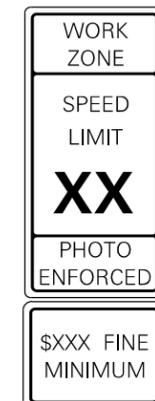
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

**WORK LIMIT SIGNING**



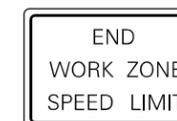
W21-1115(0)-3618

R2-1-3648

R10-1108p-3618

R2-1106p-3618

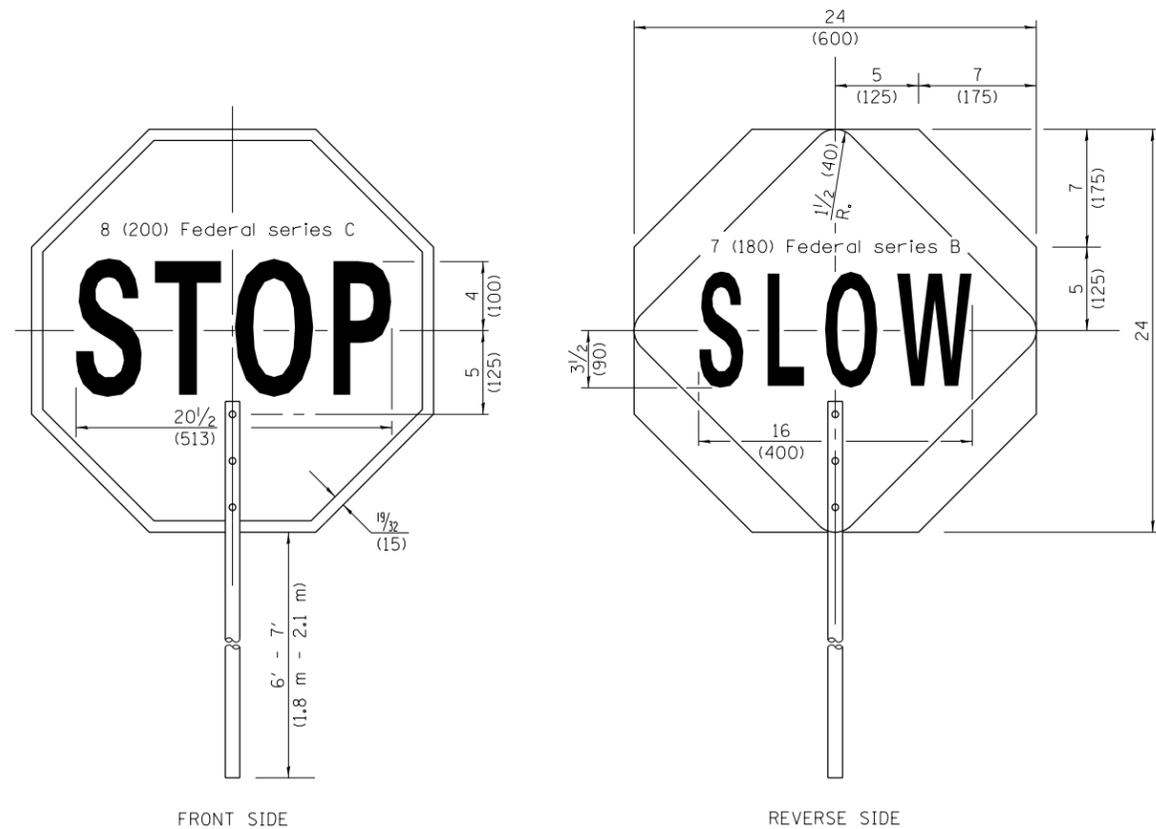
Sign assembly as shown on Standards or as allowed by District Operations.



G20-1103(0)-3660

This sign shall be used when the above sign assembly is used.

**HIGHWAY CONSTRUCTION SPEED ZONE SIGNS**



**FLAGGER TRAFFIC CONTROL SIGN**

**TRAFFIC CONTROL DEVICES**

(Sheet 2 of 3)

**STANDARD 701901-03**

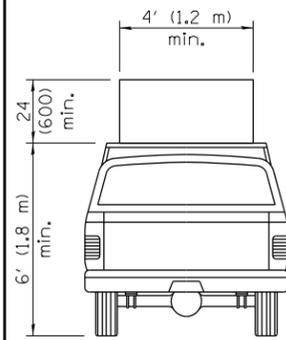
REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		6/23/2016
		/ /	TC/JAN	
		/ /	christopher.stanuch	

amec foster wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030

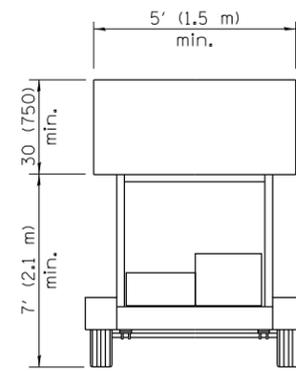
LakeCounty  
Division of Transportation

ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS  
IDOT HIGHWAY STANDARDS

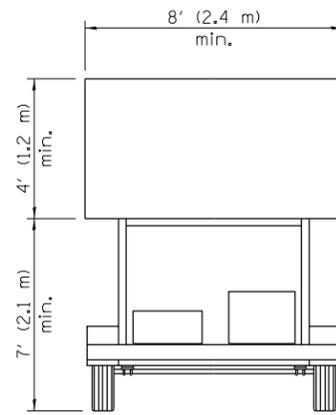
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	43	48



**TYPE A  
ROOF  
MOUNTED**

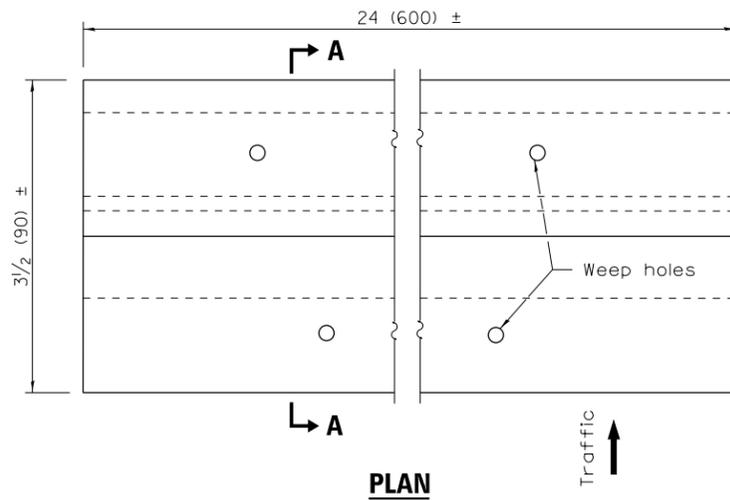


**TYPE B  
ROOF OR TRAILER  
MOUNTED**

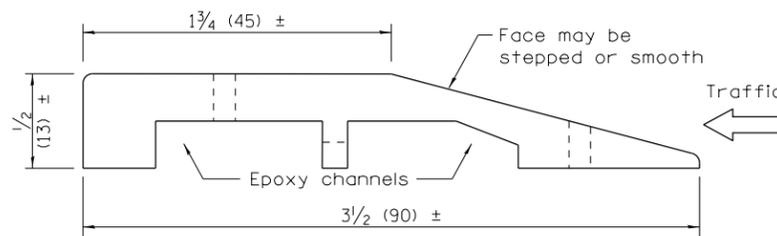


**TYPE C  
TRAILER  
MOUNTED**

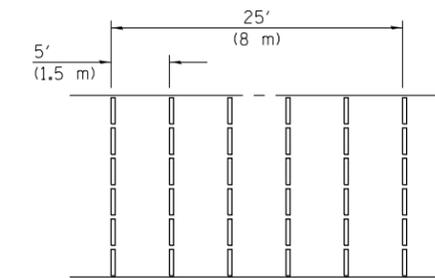
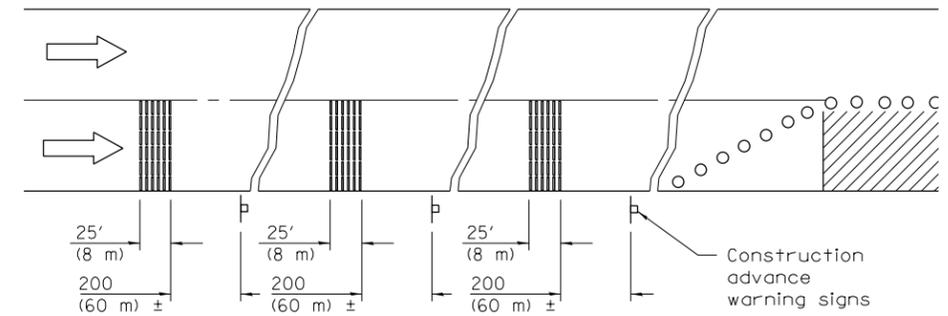
**ARROW BOARDS**



**PLAN**

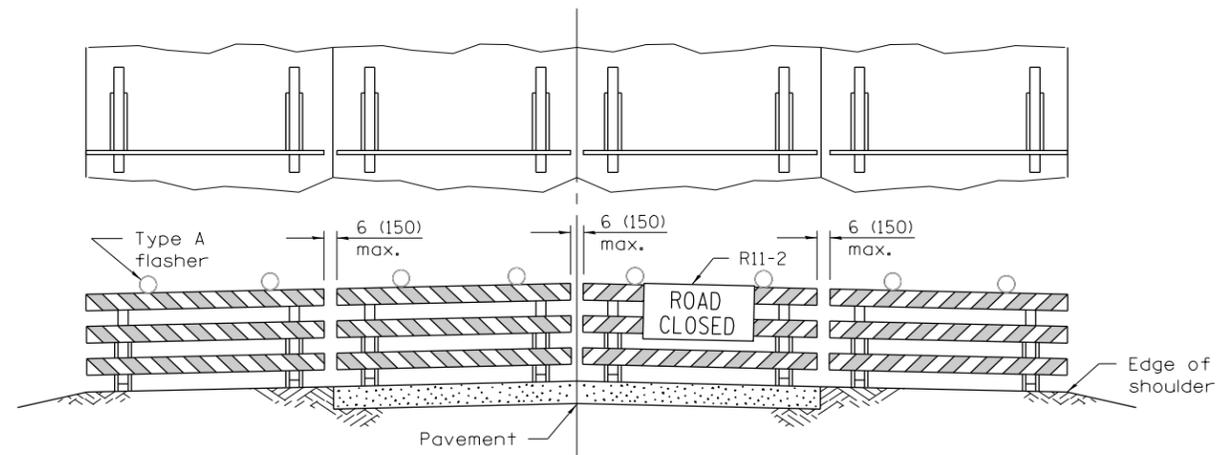


**SECTION A-A**



**TYPICAL INSTALLATION**

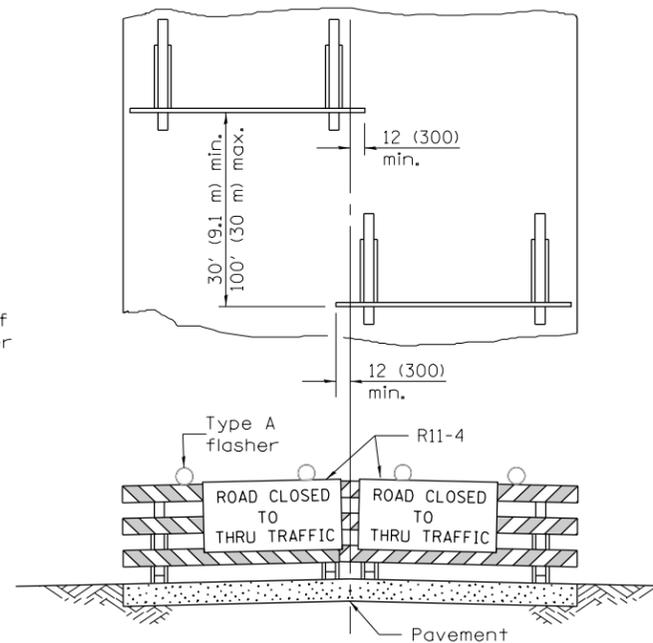
**TEMPORARY RUMBLE STRIPS**



**ROAD CLOSED TO ALL TRAFFIC**

Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.

**TYPICAL APPLICATIONS OF  
TYPE III BARRICADES CLOSING A ROAD**



**ROAD CLOSED TO THRU TRAFFIC**

Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

**TRAFFIC CONTROL  
DEVICES**

(Sheet 3 of 3)

**STANDARD 701901-03**

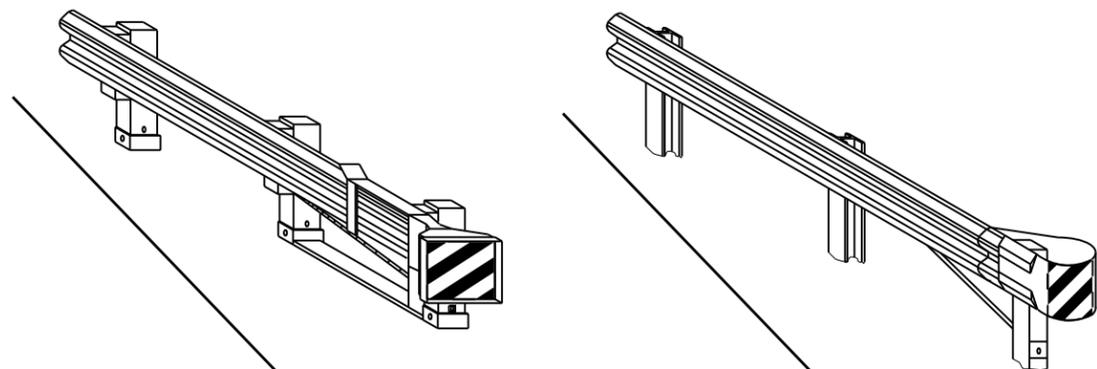
REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
				6/23/2016
			TC/JAN	
			christopher.stanuch	

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wheeler  
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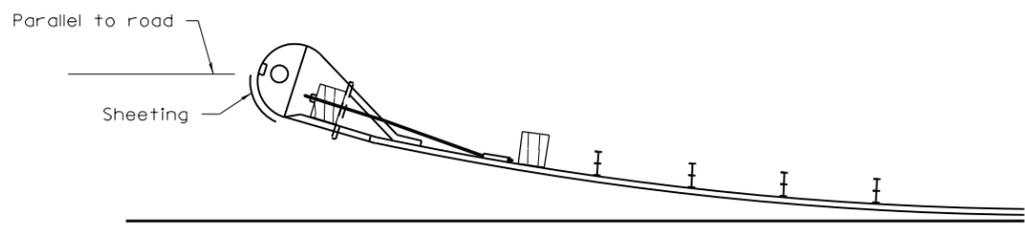
**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	44	48

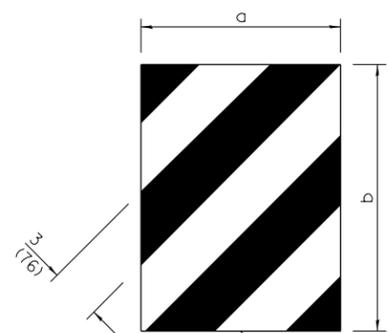


**CASE I**

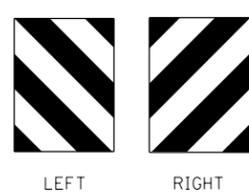
**CASE II**



**SHEETING POSITION: CASE II**

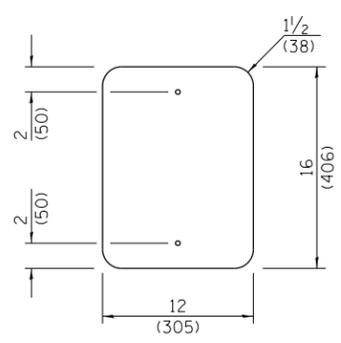


Alternating black and yellow stripes.



DIMENSION	CASE I	CASE II
a	•	18 (450)
b	•	16 (406)

**DIRECT APPLIED**

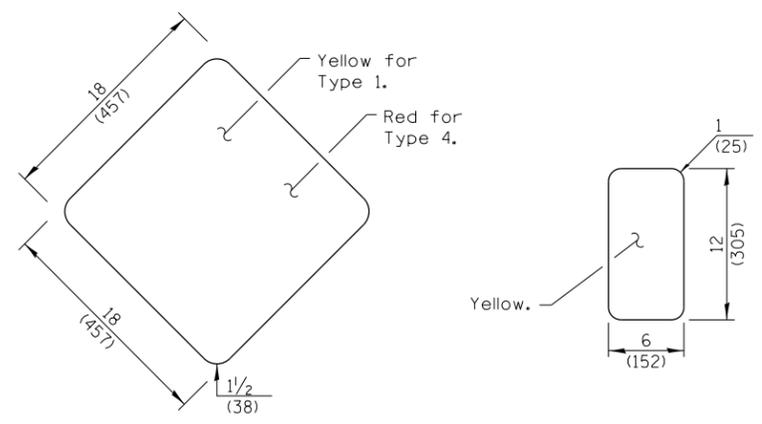


**POST MOUNTED**

**TERMINAL MARKER DETAILS**

Color: Black / Yellow reflectorized

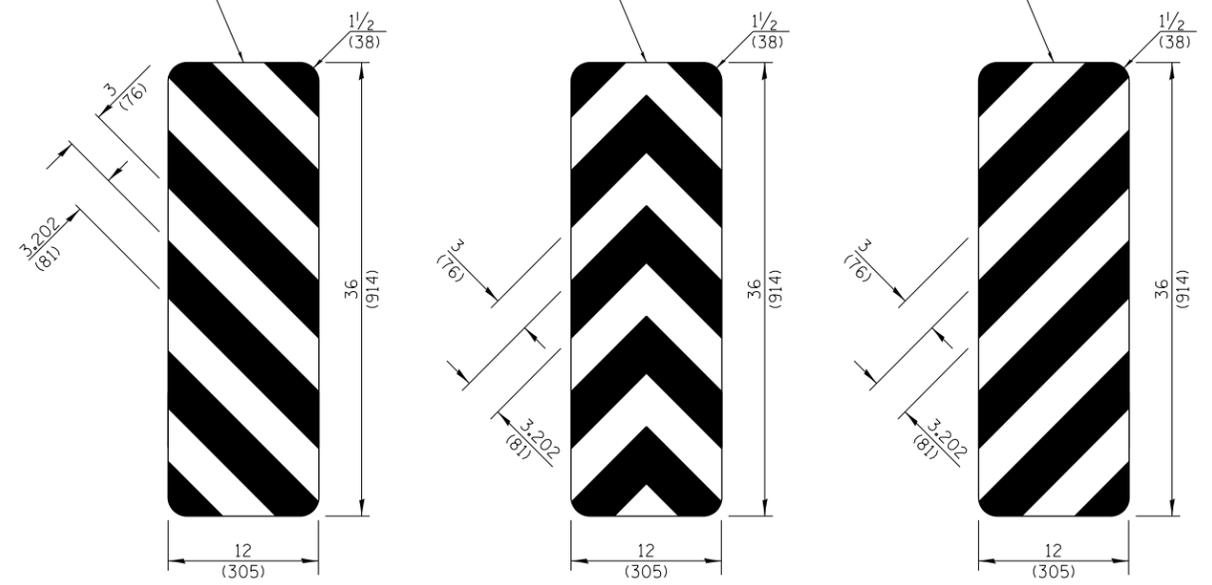
- The width and height (a, b) of the terminal marker shall be within approximately 1 (25) of the outer edge of the terminal end, with a minimum reflective area of 288 sq. in. (0.18 m<sup>2</sup>).



**TYPE 1 OR TYPE 4**

**TYPE 2**

Alternating black and yellow stripes.



**TYPE 3**

**OBJECT MARKER DETAILS**

**GENERAL NOTES**

See detail on Standard 729001 for mounting markers to posts.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
4-1-16	Renumbered standard from 635006.
1-1-09	Switched units to English (metric). Changed 'white' to 'crystal' ref.

**OBJECT AND TERMINAL MARKERS**

**STANDARD 725001**

Illinois Department of Transportation

APPROVED April 1, 2016  
*Amy Allen*  
 ENGINEER OF OPERATIONS

APPROVED April 1, 2016  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2016

NO.	DESCRIPTION	DATE	BY	PLT DATE
				6/23/2016
			JAN/TC	
			christopher.stanuch	

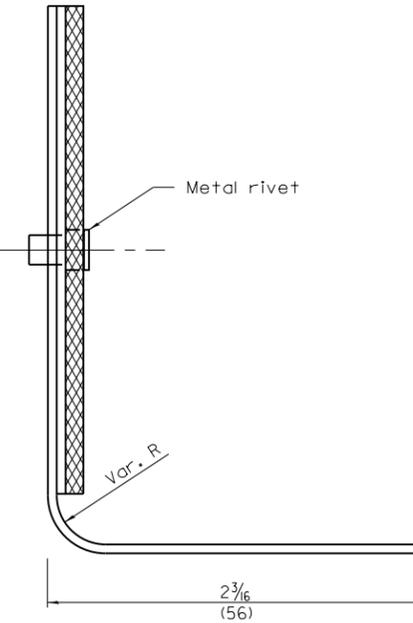
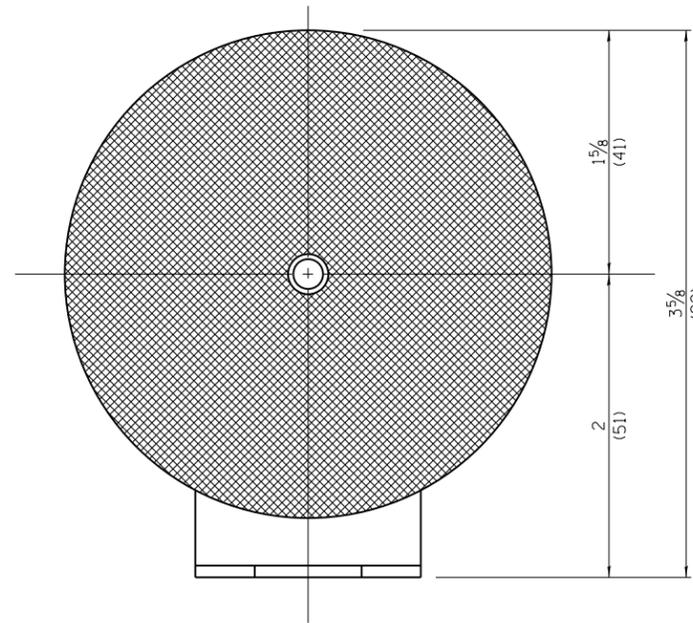
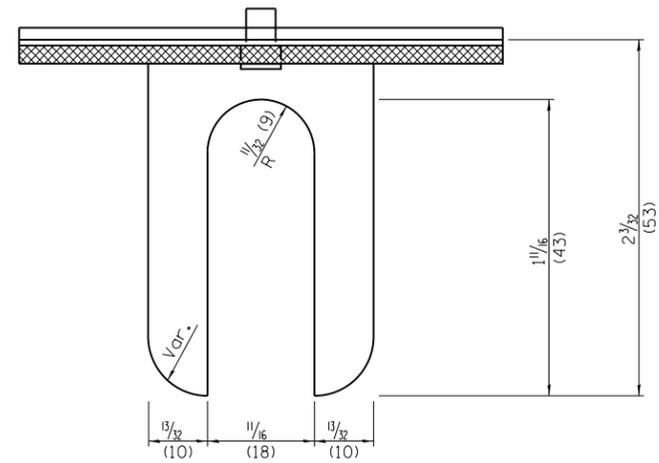
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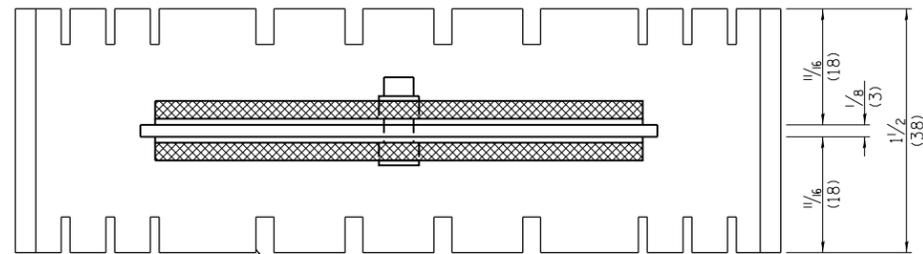
**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**

**IDOT HIGHWAY STANDARDS**

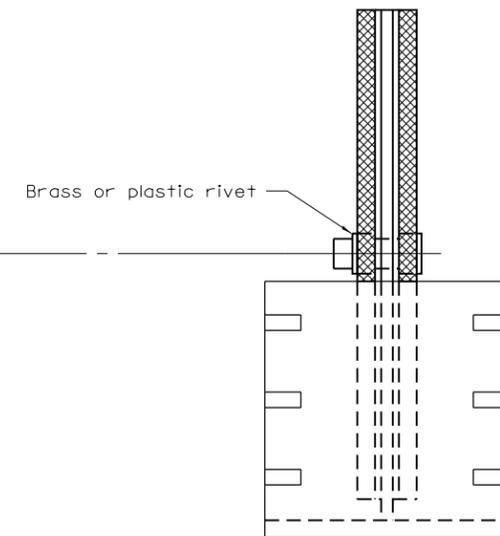
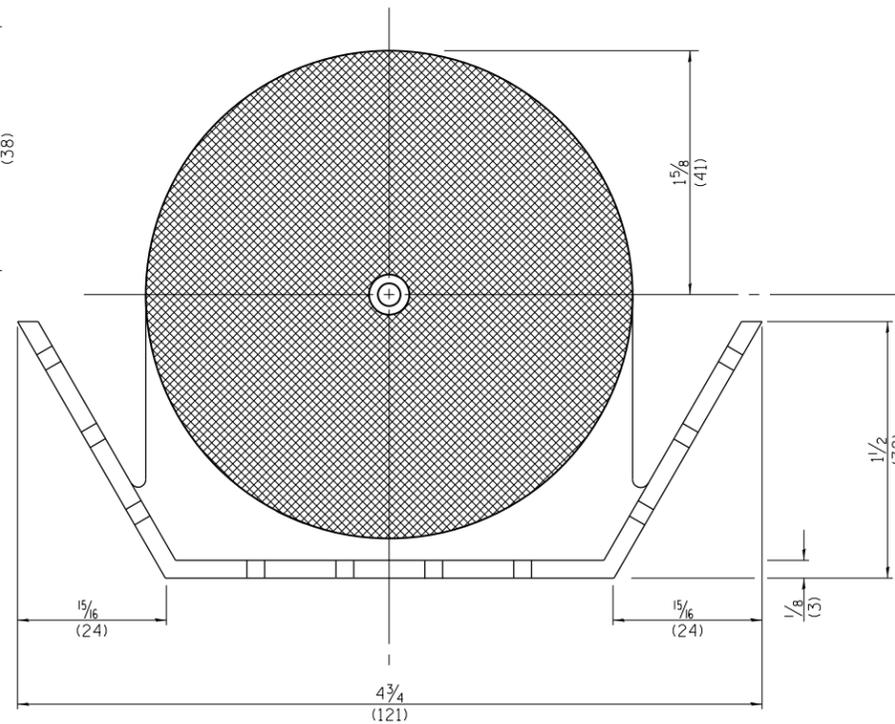
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	45	48



**REFLECTOR TYPE A**  
(monodirectional shown)



Adhesive weep slots or holes  
equally spaced on both sides



All dimensions are in inches (millimeters)  
unless otherwise shown.

**REFLECTOR TYPE B**  
(bidirectional shown)

Illinois Department of Transportation  
APPROVED April 1, 2016  
ENGINEER OF OPERATIONS  
APPROVED April 1, 2016  
ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
4-1-16	Added reflector spacing detail. Moved TERMINAL MARKER to std. 725001.
1-1-09	Switched units to English (metric).

**GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS**  
(Sheet 1 of 3)  
**STANDARD 782006**

NO.	DESCRIPTION	DATE	BY	PLLOT DATE
				6/23/2016
				JAN/TC
				christopher.stanuch

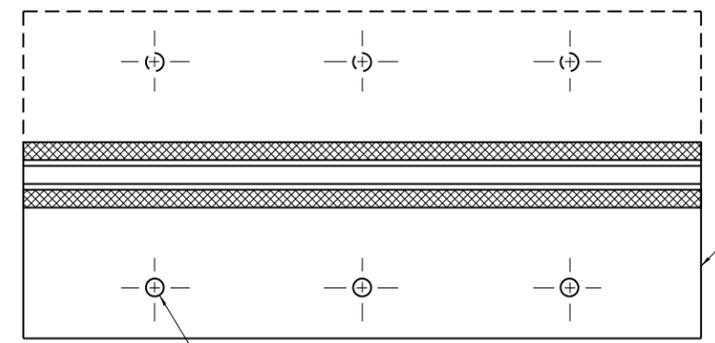
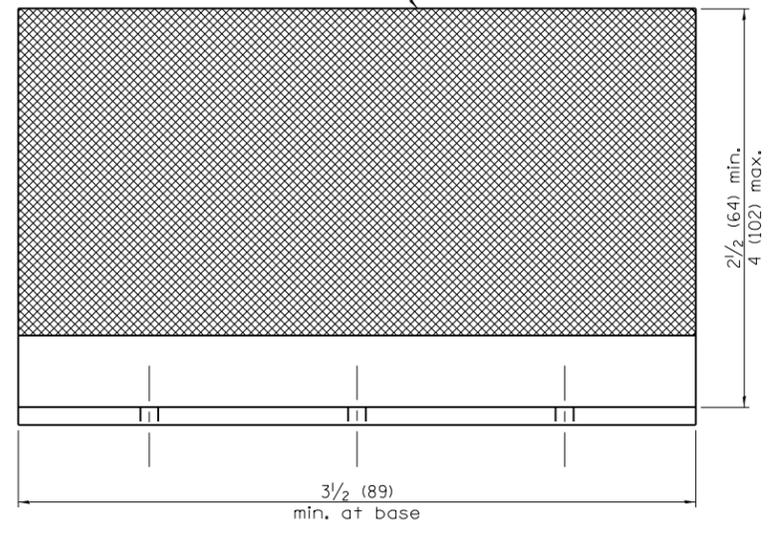
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LakeCounty  
Division of Transportation

**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

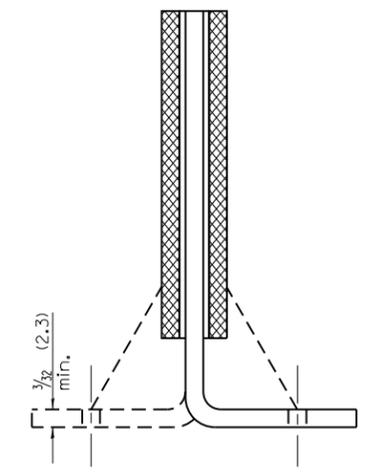
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	46	48

Reflective area. May be rectangular or slight trapezoid.



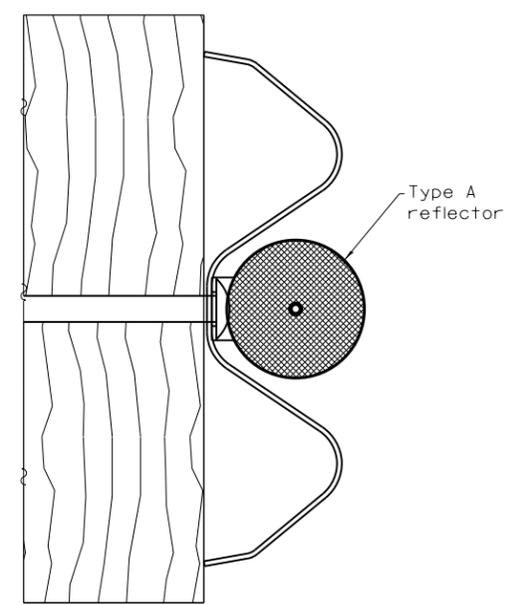
3 min. adhesive weep holes or slots each side, variable spacing.

Minimum total area of base 7.0 sq. in. (4,516 mm<sup>2</sup>)

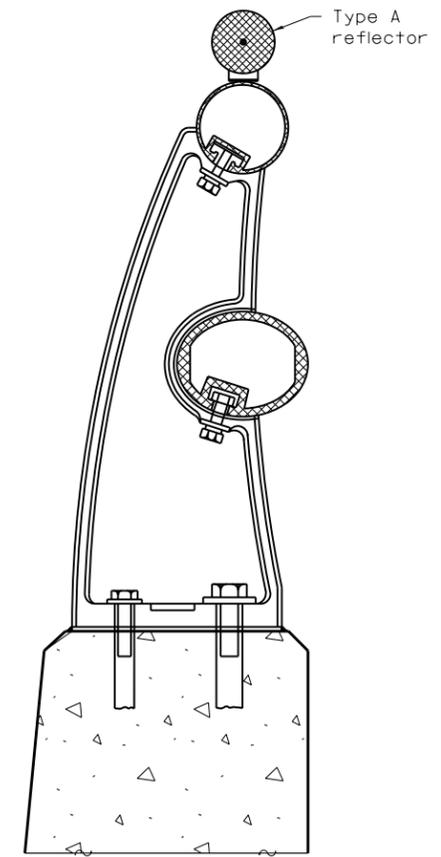
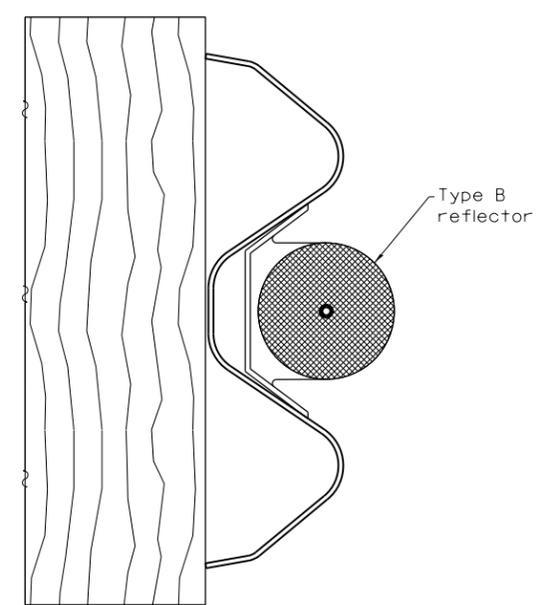


Cross section may be "T" or "L" shaped and may have side supports at ends.

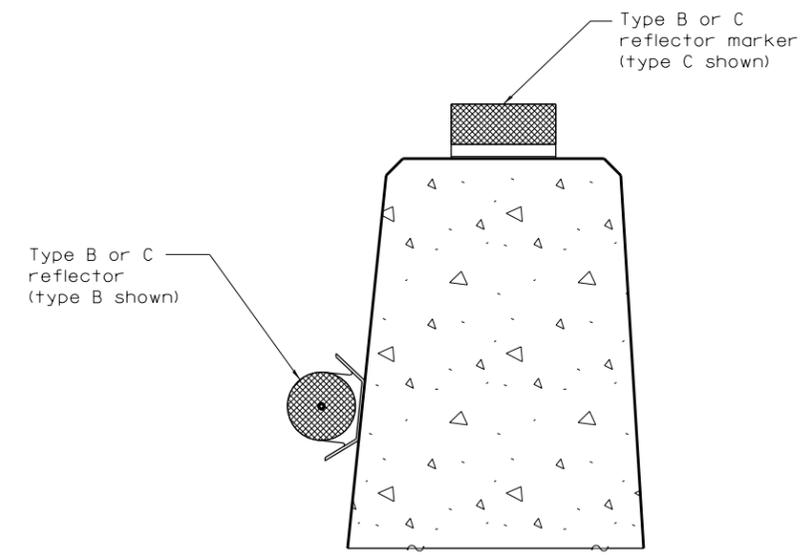
**REFLECTOR TYPE C**



**TYPICAL MOUNTING DETAIL FOR GUARDRAIL REFLECTOR**



**TYPICAL MOUNTING DETAIL FOR BRIDGE RAIL REFLECTOR**



**TYPICAL MOUNTING DETAIL FOR BARRIER WALL REFLECTOR**

**GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS**  
(Sheet 2 of 3)  
**STANDARD 782006**

Illinois Department of Transportation

APPROVED April 1, 2016  
ENGINEER OF OPERATIONS  
APPROVED April 1, 2016  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2000

REVISIONS / REMARKS		DATE	BY	PLLOT DATE:	6/23/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	JAN/TC
		/ /		PLOTTED BY:	christopher.stanuch

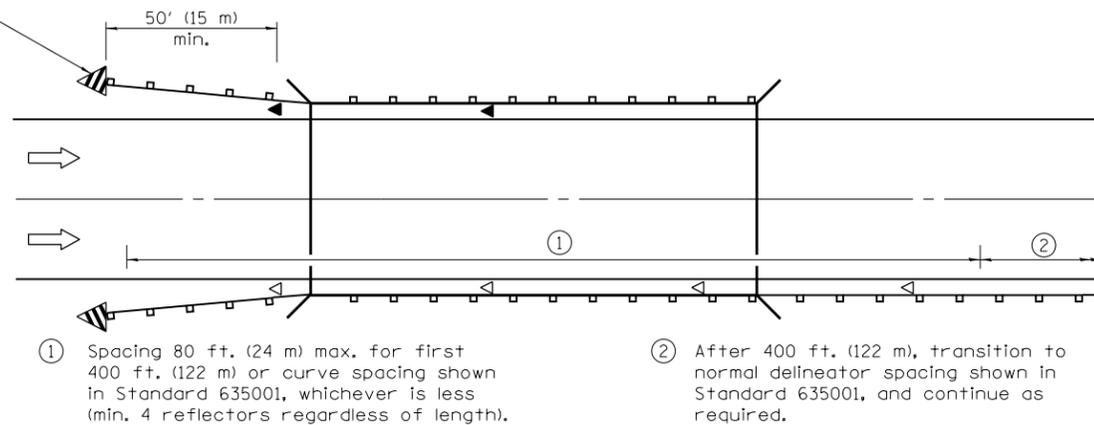
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Division of Transportation

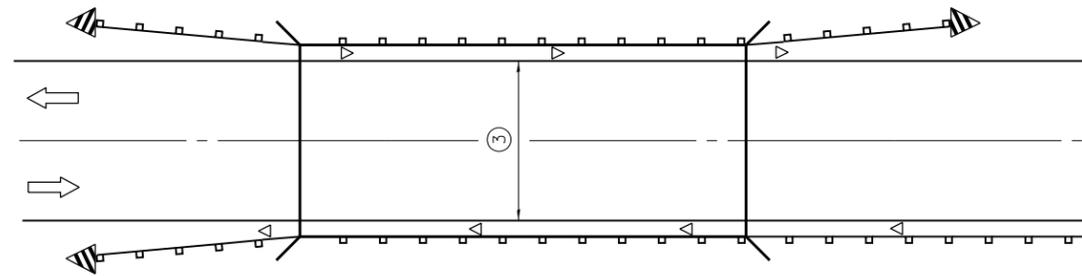
**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	47	48

Terminal marker.  
See standard  
725001.



ONE-WAY TRAFFIC



◁ Monodirectional crystal

◀ Monodirectional amber

TWO-WAY TRAFFIC

**GUARDRAIL /BARRIER WALL  
REFLECTOR PLACEMENT DETAIL**

**GUARDRAIL AND  
BARRIER WALL REFLECTOR  
MOUNTING DETAILS**  
(Sheet 3 of 3)

**STANDARD 782006**

Illinois Department of Transportation	
APPROVED	April 1, 2016
<i>Amy Allen</i>	
ENGINEER OF OPERATIONS	
APPROVED	April 1, 2016
<i>Christopher Stanuch</i>	
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-2000

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
				6/23/2016
				JAN/TC
				christopher.stanuch

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**ROBERT McCLORY BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00173-14-BR	48	48