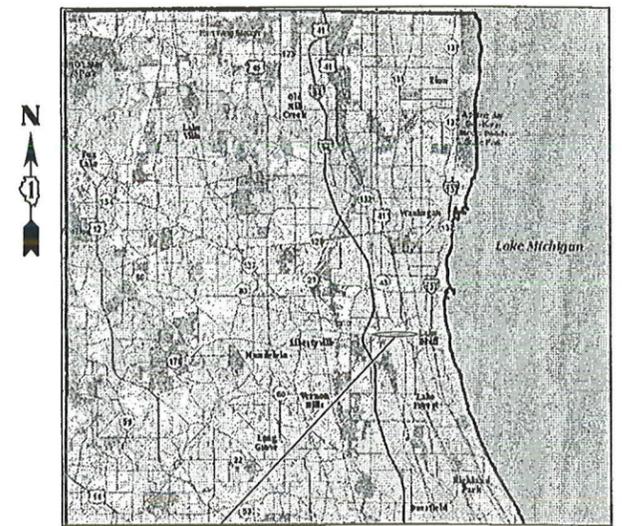


# LAKE COUNTY DIVISION OF TRANSPORTATION PLANS FOR PROPOSED COUNTY HIGHWAY

## NORTH SHORE BIKE PATH OVER SKOKIE RIVER, C.N. RR & METRA RR ABUTMENT REPAIRS SECTION 16-00999-25-BR LAKE COUNTY, ILLINOIS



PROJECT LOCATION LOCATION MAP

### INDEX OF SHEETS

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- 2 SUMMARY OF QUANTITIES
- 3 GENERAL NOTES
- 4 THRU 10 STRUCTURAL REPAIR PLANS - SKOKIE RIVER
- 11 THRU 15 STRUCTURAL REPAIR PLANS - C.N. RAILROAD
- 16 THRU 20 STRUCTURAL REPAIR PLANS - METRA RAILROAD
- 21 LCDOT STANDARDS AND DETAILS
- 22 THRU 33 IDOT HIGHWAY STANDARDS

### LCDOT STANDARD DETAILS

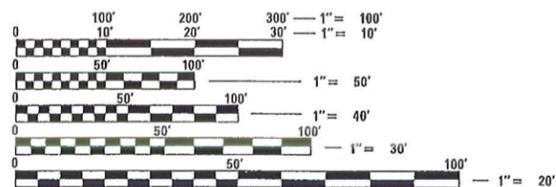
LC4202 CONCRETE WASHOUT FACILITIES

### IDOT HIGHWAY STANDARD

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS (8 SHEETS)
- 701006-05 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701901-05 TRAFFIC CONTROL DEVICES (3 SHEETS)

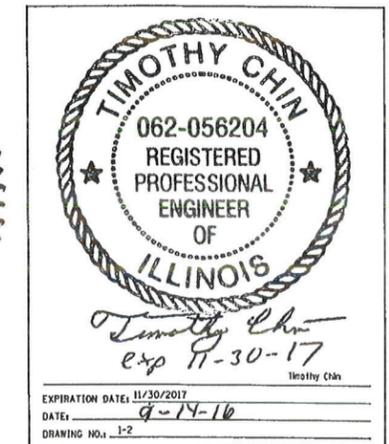
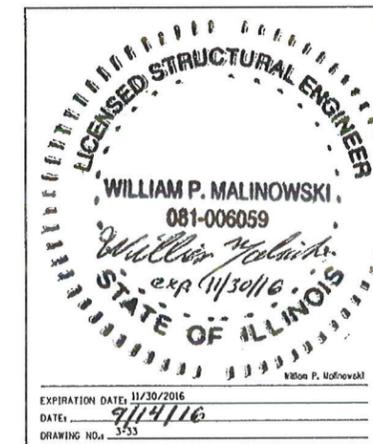
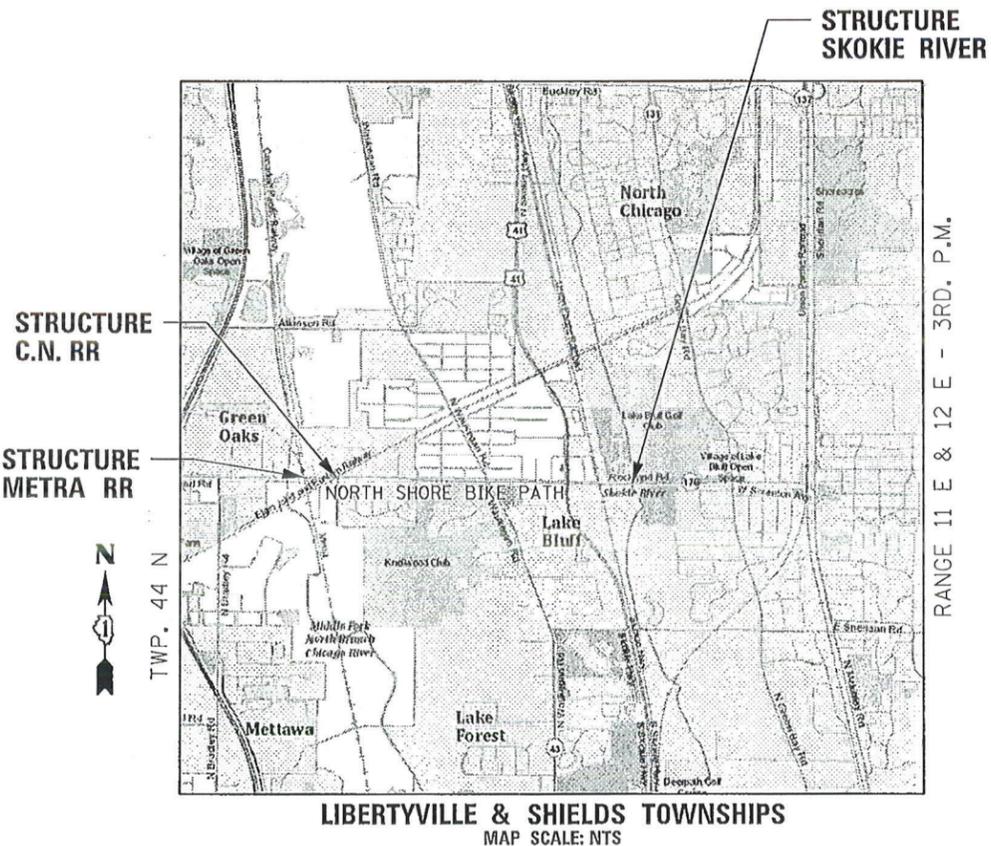
### TRAFFIC DATA

NA



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: LIBERTYVILLE & SHIELDS  
MUNICIPALITY: GREEN OAKS & LAKE BLUFF**

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

Signature: William Malinowski  
Date: 9/14/16  
Illinois License No.: 081-006059  
Expiration Date: 11/30/2016  
Field: STRUCTURAL ENGINEER  
Approved by: Paula Trigg  
County Engineer  
Date: Sept 20, 2016

NO.	REVISIONS / REMARKS	DATE	BY	PLOT DATE
				9/14/2016
				CRS/TC
				PLOTTED BY: chr/stephan.stanuch

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Lake County  
Division of Transportation

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	1	33

**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**COVER SHEET**

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
• 20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	28
50102400	CONCRETE REMOVAL	CU YD	0.6
50300225	CONCRETE STRUCTURES	CU YD	0.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	40
59000200	EPOXY CRACK INJECTION	FOOT	31
67100100	MOBILIZATION	L SUM	1
• LC200501	MAINTENANCE OF TEMPORARY EROSION CONTROL SYSTEMS	UNIT	468
• X0321865	ANTI-GRAFFITI PROTECTION SYSTEM	SQ FT	7,610
• X2010400	STUMP REMOVAL ONLY	UNIT	50
• X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
• XX006343	SEEDING (COMPLETE)	SQ YD	24
• XX006729	PERIMETER EROSION BARRIER, ROLLED EXCELSIOR	FOOT	45
• Z001275A	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES) (SPECIAL)	SQ FT	6,191
• Z001275B	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES) (SPECIAL)	SQ FT	954
• Z0018900	DRILL AND GROUT DOWEL BARS	EACH	14
• Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

• SPECIAL PROVISION

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE:
		/ /		9/14/2016
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		/ /		PLOTTED BY: christopher.stanuch


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NORTH SHORE BIKE PATH ABUTMENT REPAIRS				ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
<b>SUMMARY OF QUANTITIES</b>				--	VAR	16-00999-25-BR	2	33

**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).

**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. 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.
2. 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".

**DRAINAGE (CONTINUED)**

3. 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.
4. 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.

**LANDSCAPING**

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

**SIGNS**

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).
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: 701006-05, 701901-05
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. "PATH WORK AHEAD" AND "BE PREPARED TO STOP" SIGNS SHALL BE EQUIPPED WITH FLAGS.

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /		CRS/TC
		/ /		PLOTTED BY: christopher.stanuch

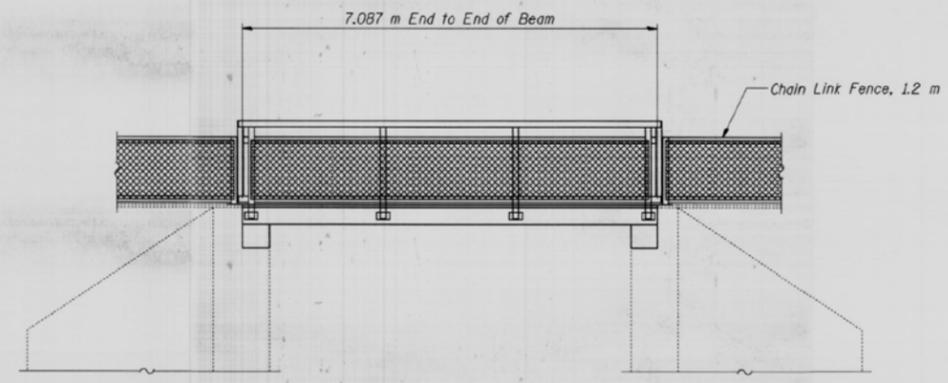

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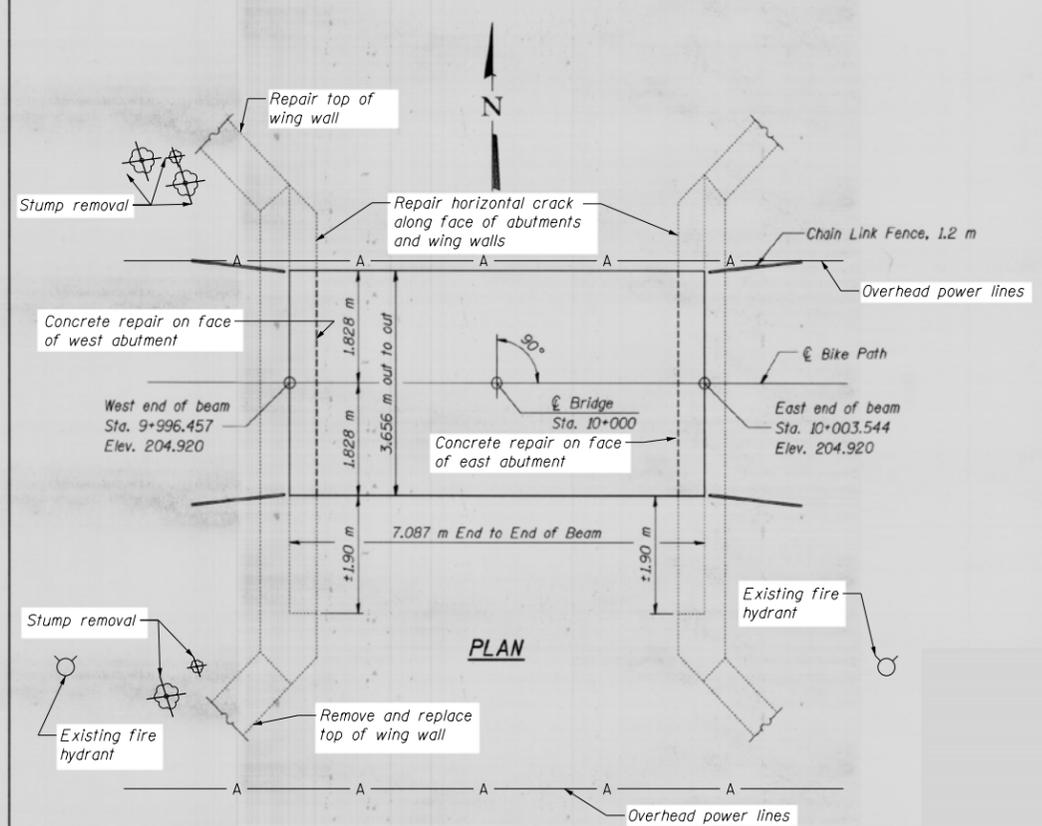
**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**

**GENERAL NOTES**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	3	33



**ELEVATION**



**PLAN**

**GENERAL NOTES**

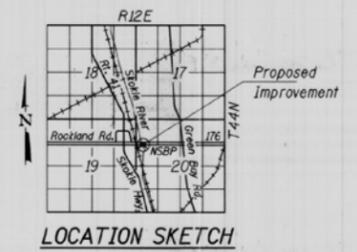
Reinforcement bars shall conform to the requirements of AASHTO M 31M, M 42M or M 53M Grade 400.

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 6 mm.

Plan dimensions and details relative to existing structure 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 of 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.

~~NORTH SHORE BIKE PATH  
BUILT 199 BY  
LAKE COUNTY  
SEC. 98-08252-00-BP  
STR. NO.~~

**NAME PLATE**  
See Std. 515001



**DESIGN SPECIFICATIONS**

AASHTO Guide Specifications for the Design of Pedestrian Bridges, 1996, AASHTO & 1997 Interim

**DESIGN LOADING**

4.08 kPa Live Load uniform  
45 kN Live Load concentrated.  
(not to be used simultaneously with 4.08 kPa uniform live load.)

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 24 \text{ MPa}$

$f_y = 400 \text{ MPa (rein.)}$

**PRECAST PRESTRESSED UNITS**

$f'_c = 42 \text{ MPa}$

$f'_c = 35 \text{ MPa}$

$f'_c = 1860 \text{ MPa (12.7 mm strand)}$

$f'_c = 1395 \text{ MPa (12.7 mm strand)}$

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	PLOT DATE:	9/14/2016
		/ /		DSGNR/CHECKED BY:	CRS/MPB
		/ /		PLOTTED BY:	christopher.stanuch

amec  
foster  
wheeler

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



NORTH SHORE BIKE PATH OVER SKOKIE RIVER				ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
GENERAL PLAN AND ELEVATION				--	252	16-00999-25-BR	4	33

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	0.6
Concrete Structures	Cu Yd	0.6
Reinforcement Bars, Epoxy Coated	Pound	40
Epoxy Crack Injection	Foot	31
* Maintenance of Temporary Erosion Control Systems	Unit	468
* Stump Removal Only	Unit	50
* Seeding (Complete)	Sq Yd	24
* Perimeter Erosion Barrier, Rolled Excelsior	Foot	45
* Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special)	Sq Ft	109
* Structural Repair of Concrete (Depth Greater than 5 inches) (Special)	Sq Ft	14
* Drill and Grout Dowel Bars	Each	14

\* Special Provision

**INDEX OF SHEETS - NORTH SHORE BIKE PATH OVER SKOKIE RIVER**

4	General Plan and Elevation
5	Index of Sheets, Notes and Total BOM
6	Plan and Profile - For Information Only
7	Superstructure - For Information Only
8	Pedestrian Bridge Abutments - For Information Only
9	Abutment Repair
10	MOT, Erosion Control and Lanscaping Plan

**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.
- 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.

**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.
- Only those trees designated by the Engineer shall be removed. The Contractor shall protect all remaining trees from damage due to his operations.
- Temporary storage of the following items will not be allowed within the regulatory flood plain during the maintenance activity: unsecured buoyant materials, flammable liquids, chemicals, explosives, pollutants, other hazardous materials, and landscape waste.
- The Contractor is not permitted to allow any material or construction debris to fall into the river. The Contractor will be responsible for installing all necessary equipment and devices necessary to prevent material from being deposited into the waterway during the maintenance operation. These may include, but are not limited to, scaffolding, netting, silt fence, floating platform, etc. these items will not be paid separately, but shall be included in Concrete Removal.
- No welding of reinforcement bars shall be performed.
- 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.
- 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.
- The Contractor shall be responsible for returning all existing areas (to remain) affected by construction activities, equipment, or laborers to the original undisturbed conditions. The Contractor shall also be responsible for protecting all new work until the completion of the contract.
- 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.
- Heavy construction equipment shall be prohibited on the pedestrian bridge.
- Access to the bridge and abutments can made from the commercial driveways on either side of the guardrails along Rockland Road.

REVISIONS / REMARKS				
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		/ /		9/14/2016
		/ /		CRS/MGH
		/ /		christopher.stanuch

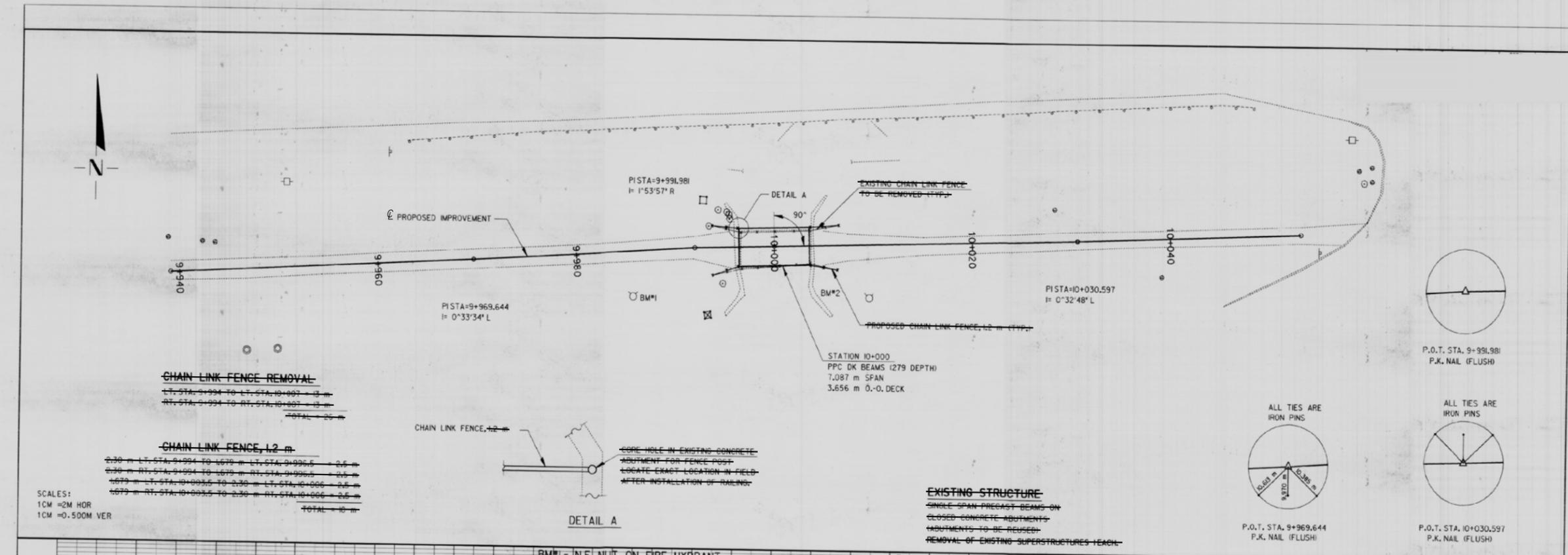

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**NORTH SHORE BIKE PATH OVER SKOKIE RIVER**

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

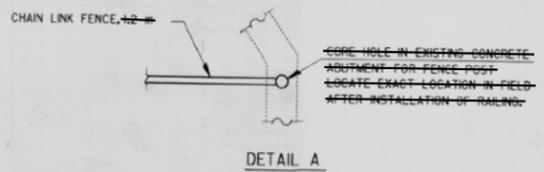
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	252	16-00999-25-BR	5	33



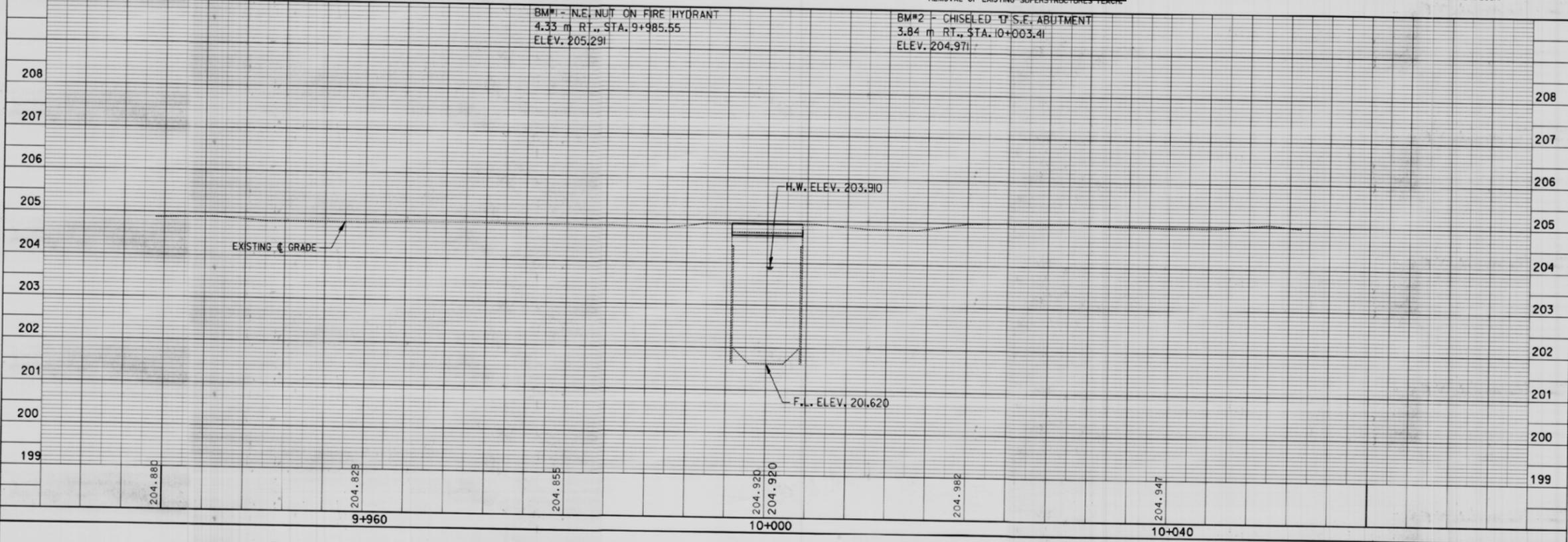
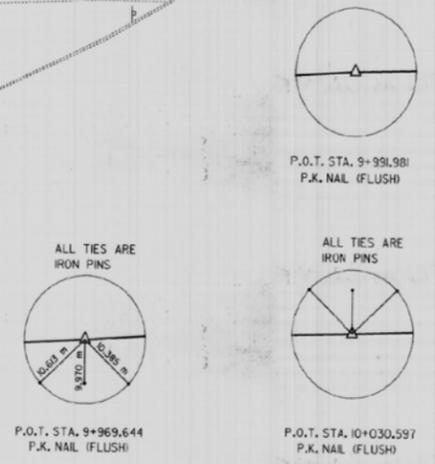
**CHAIN LINK FENCE REMOVAL**  
 LT. STA. 9+994 TO LT. STA. 10+007 = 13 m  
 RT. STA. 9+994 TO RT. STA. 10+007 = 13 m  
 TOTAL = 26 m

**CHAIN LINK FENCE, 1.2 m**  
 2.30 m LT. STA. 9+994 TO 1.670 m LT. STA. 9+996.5 = 2.4 m  
 2.30 m RT. STA. 9+994 TO 1.670 m RT. STA. 9+996.5 = 2.4 m  
 1.670 m LT. STA. 10+003.5 TO 2.30 m LT. STA. 10+006 = 2.5 m  
 1.670 m RT. STA. 10+003.5 TO 2.30 m RT. STA. 10+006 = 2.5 m  
 TOTAL = 10 m

SCALES:  
 1CM = 2M HOR  
 1CM = 0.500M VER



**EXISTING STRUCTURE**  
 SINGLE SPAN PRECAST BEAMS ON  
 CLOSED CONCRETE ABUTMENTS  
 ABUTMENTS TO BE REUSED  
 REMOVAL OF EXISTING SUPERSTRUCTURES LEACH



BM#1 - N.E. NUT ON FIRE HYDRANT  
 4.33 m RT., STA. 9+985.55  
 ELEV. 205.291

BM#2 - CHISELED 'I' S.E. ABUTMENT  
 3.84 m RT., STA. 10+003.41  
 ELEV. 204.971

**FOR INFORMATION ONLY**

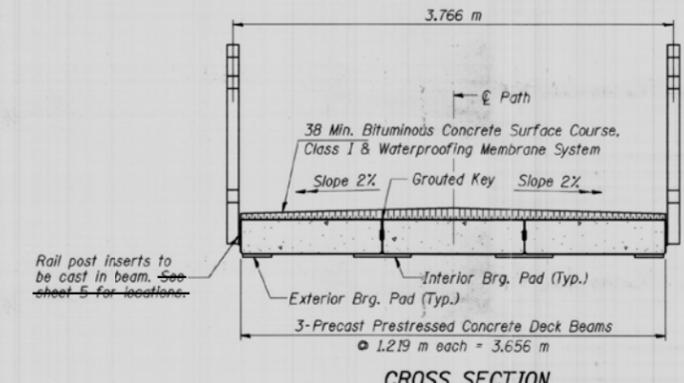
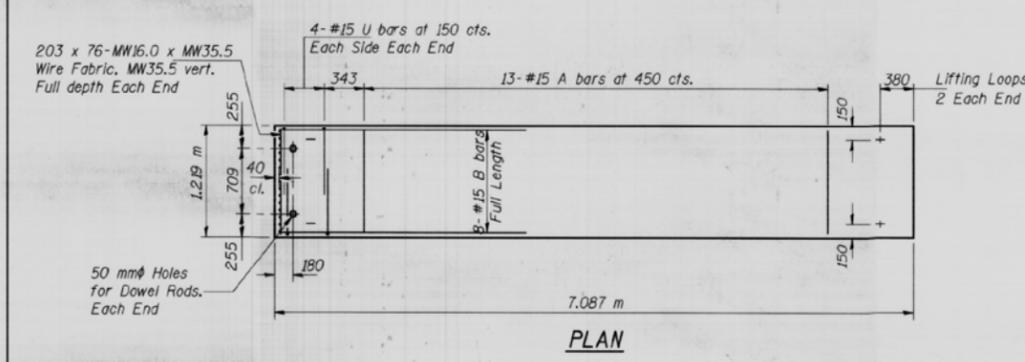
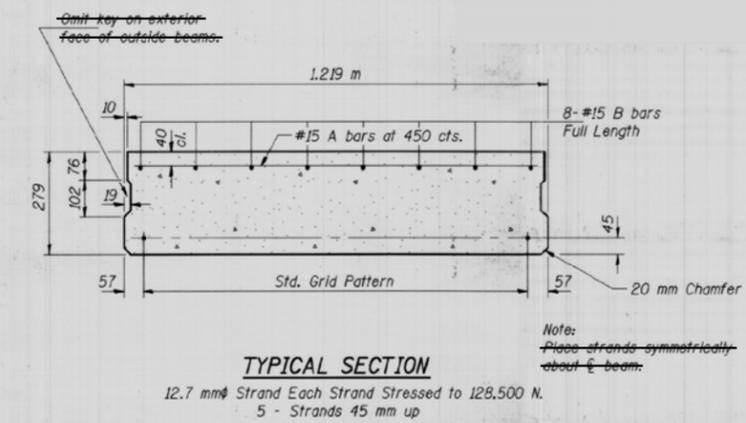
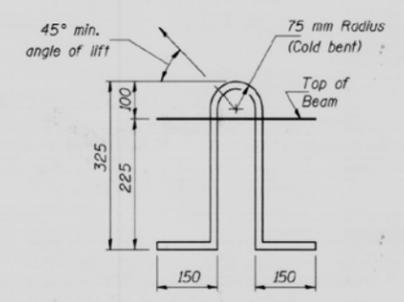
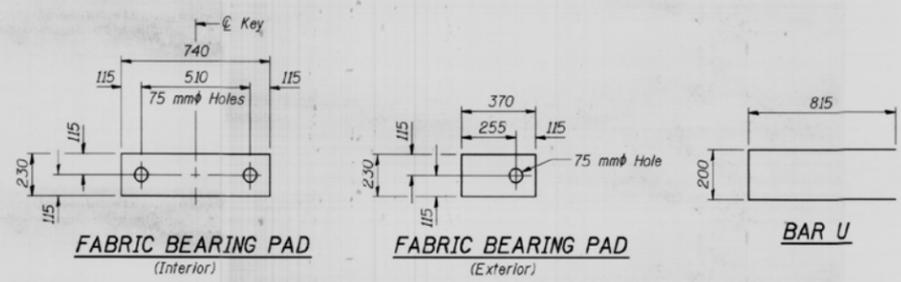
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NO.	DESCRIPTION	/ /		DSGNER/CHECKED BY:	CRS/MPB
		/ /		PLotted BY:	christopher.stanuch

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



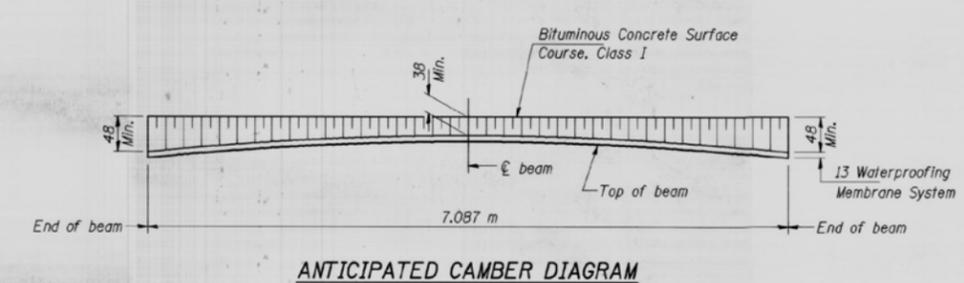
**NORTH SHORE BIKE PATH OVER SKOKIE RIVER**  
**PLAN AND PROFILE - FOR INFORMATION ONLY**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	252	16-00999-25-BR	6	33



**NOTES**

- Prestressing steel shall be uncoated high strength, stress relieved 7 wire strand (F<sub>u</sub> 1860 MPa). The nominal diameter shall be 12.7 mm and the nominal cross sectional area shall be 98.71 mm<sup>2</sup>.
- Lifting loops shall be 2 - 12.7 mm strands (F<sub>u</sub> 1860 MPa) as shown.
- Reinforcement bars shall conform to the requirements of ASTM A 618 Grade 40.
- The bearing seal surfaces shall be adjusted by shimming to assure firm and even bearing. Two 3 mm fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
- A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.
- Required Release Strength, f<sub>cr</sub>, shall be 29 MPa.
- An equal substitution of the low relaxation strands for the stress relieved strands will be permitted.
- All dimensions are in millimeters (mm) except as noted.



**FOR INFORMATION ONLY**

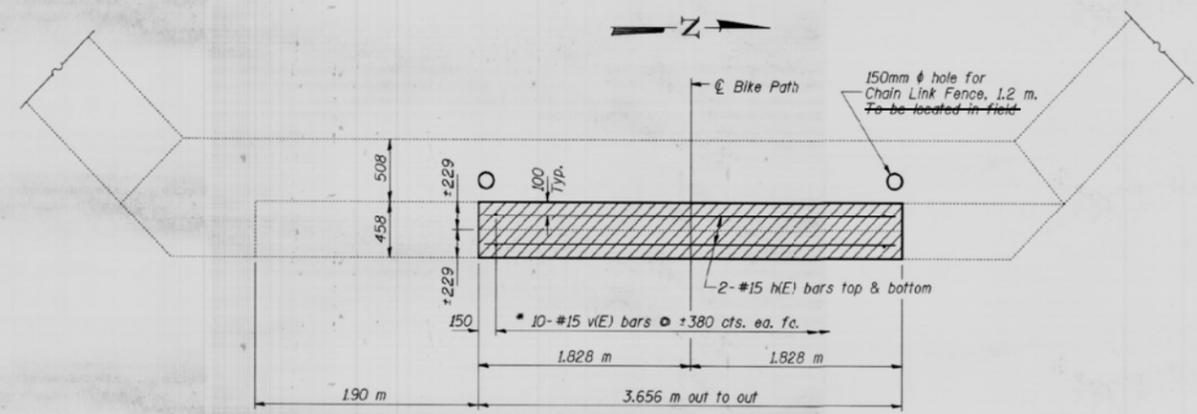
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NO.	DESCRIPTION	DATE	BY	PLOT DATE:	9/14/2016
		/ /		DSGNR/CHECKED BY:	CRS/MPB
		/ /		PLOTTED BY:	christopher.stanuch

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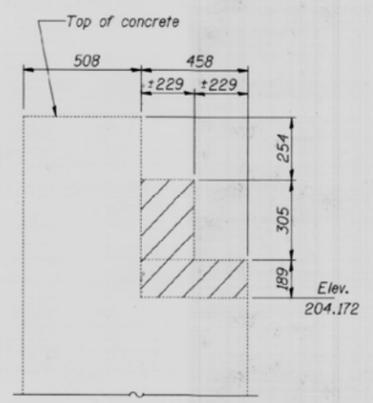
LakeCounty  
Division of Transportation

NORTH SHORE BIKE PATH OVER SKOKIE RIVER		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
SUPERSTRUCTURE - FOR INFORMATION ONLY		--	252	16-00999-25-BR	7	33

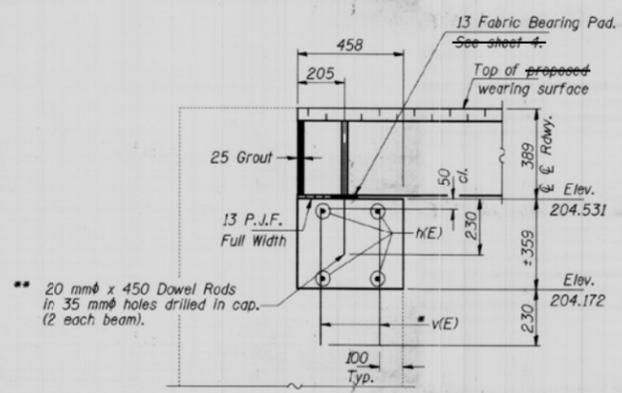
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PLAN  
(West Abutment)

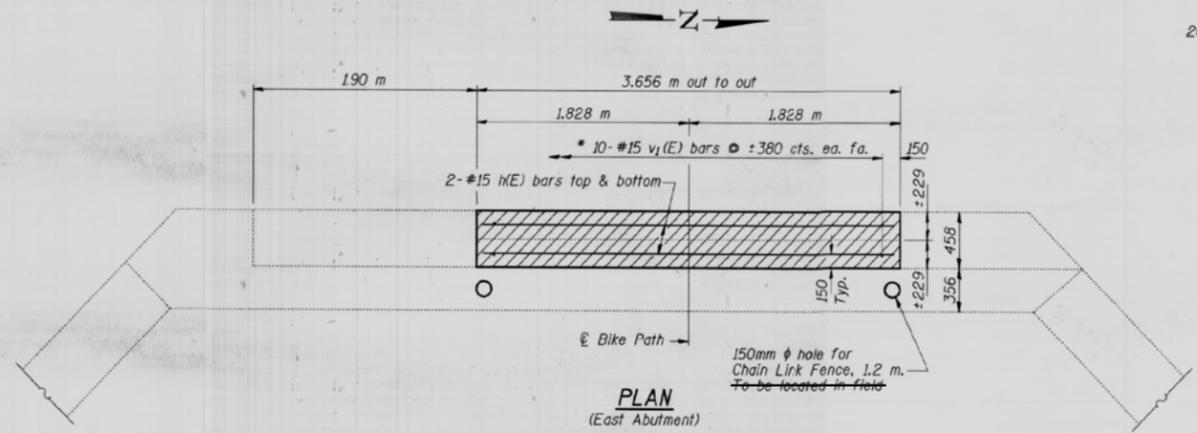


SECTION THRU EXISTING CAP  
(West Abutment)

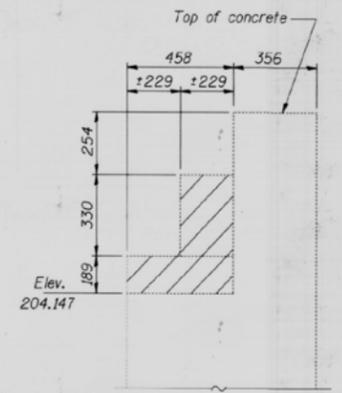


SECTION THRU PROPOSED CAP  
(West Abutment)

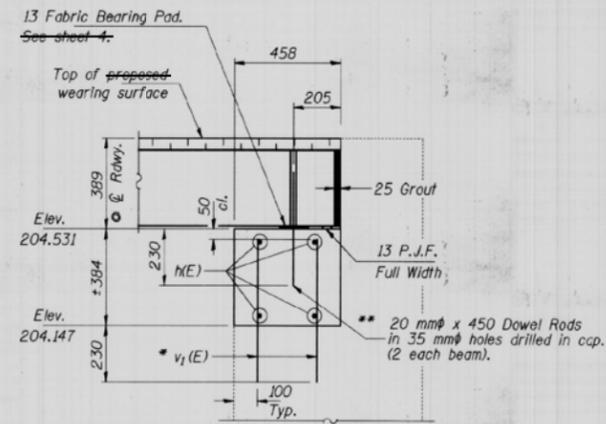
Hatched areas indicate "Concrete Removal".



PLAN  
(East Abutment)



SECTION THRU EXISTING CAP  
(East Abutment)



SECTION THRU PROPOSED CAP  
(East Abutment)

\*\* Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting the shear keys.

Note: Existing reinforcement, extending into removal areas, shall be cleaned, straightened and incorporated into new construction.

Reinforcement bars designated (E) shall be epoxy coated.

\* Drill 19 mm x 230 min. hole. Epoxy grout h(E) & v1(E) bars. Use a grout approved by the Department of epoxy grout in accordance with Sec. 684 of the Standard Specifications. The method of grout application shall be approved by the Engineer.

All dimensions are in millimeters (mm) except as noted.

**FOR INFORMATION ONLY**

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	9/14/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/MPB
		/ /		PLOTTED BY:	christopher.stanuch

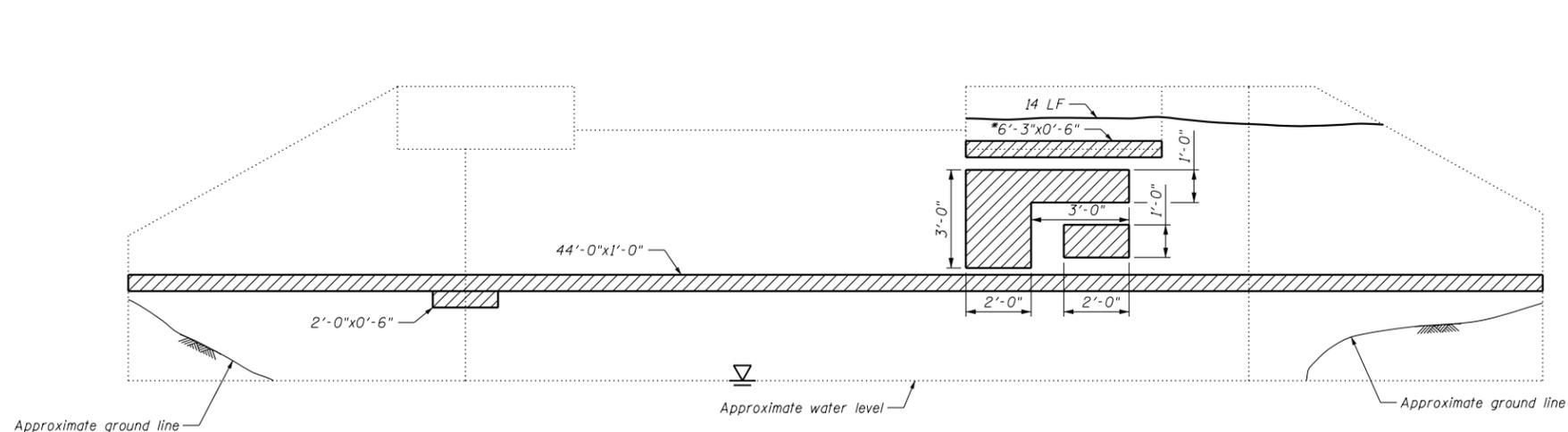
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foster  
wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030



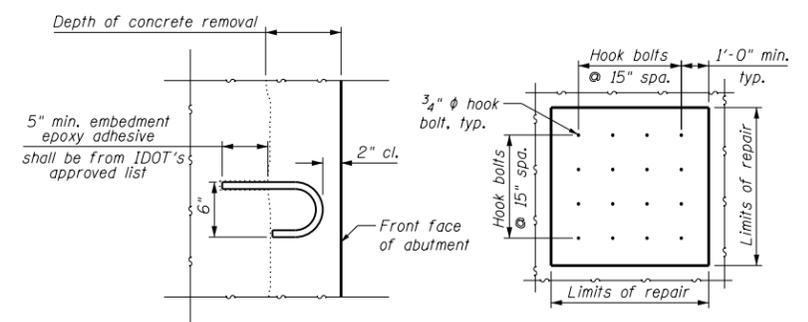
**NORTH SHORE BIKE PATH OVER SKOKIE RIVER**  
**PEDESTRIAN BRIDGE ABUTMENTS - FOR INFORMATION ONLY**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	252	16-00999-25-BR	8	33

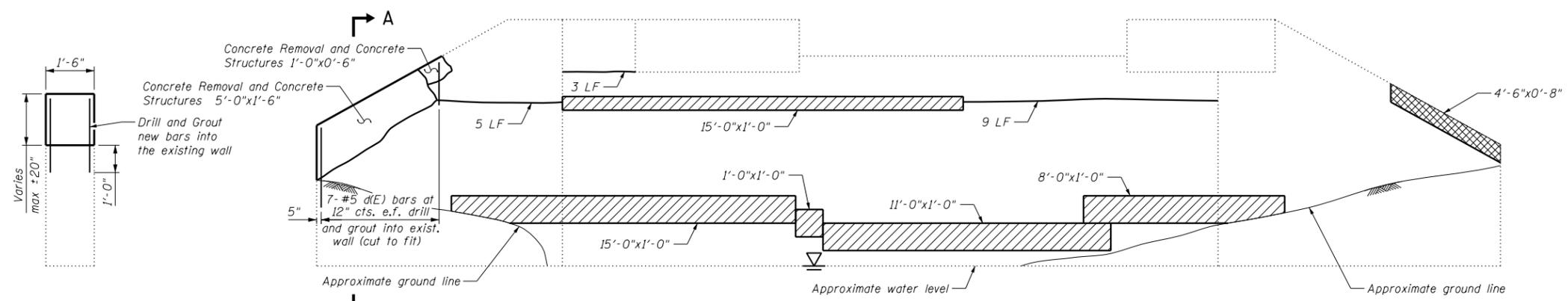
FILE NAME: SkokieRiver-005-PedBridgeAbut.dgn



**EAST ABUTMENT - ELEVATION**  
(Looking East)  
NTS



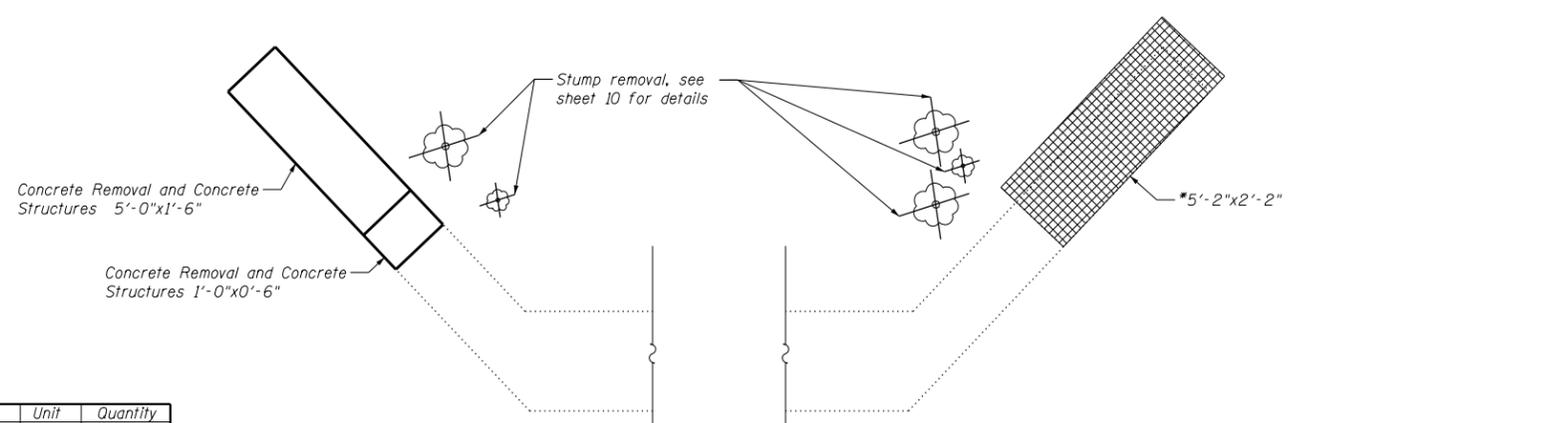
**HOOK BOLT REPAIR DETAIL**



**SECTION A-A**

**WEST ABUTMENT - ELEVATION**  
(Looking West)  
NTS

- Notes:
- Hook bolts shall be installed where the depth of concrete removal 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.) (Special).
  - Where depth of concrete removal is less than 6 inches and the area of repair is greater than 100 sq. ft. high performance shotcrete is recommended for repair.
  - 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.
  - The Contractor shall ensure that no concrete and/or other debris will be allowed to drop into the river. Concrete and/or other debris shall be caught on a floating platform or other means approved by the Engineer. Cost included with Concrete Removal.



**WEST ABUTMENT WINGWALLS - PLAN**  
NTS

**BAR LIST**

Bar	No.	Size	Length	Shape
d(E)	14	#5	2'-6"	

**BILL OF MATERIAL**

Description	Unit	Quantity
Concrete Removal	Cu Yd	0.6
Concrete Structures	Cu Yd	0.6
Reinforcement Bars, Epoxy Coated	Pound	40
Epoxy Crack Injection	Foot	31
Stump Removal Only	Unit	50
Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special)	Sq Ft	109
Structural Repair of Concrete (Depth Greater than 5 inches) (Special)	Sq Ft	14
Drill and Grout Dowel Bars	Each	14

- LEGEND**
- Structural repair of concrete (Depth Greater than 5 inches) (Special)
  - Structural repair of concrete (Depth Equal to or Less than 5 inches) (Special)
  - Epoxy Crack Injection

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

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	9/14/2016
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		/ /		PLOTTED BY:	christopher.stanuch

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**NORTH SHORE BIKE PATH OVER SKOKIE RIVER**  
**ABUTMENT REPAIR**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	252	16-00999-25-BR	9	33

**MAINTENANCE OF TRAFFIC / SEQUENCE OF CONSTRUCTION**

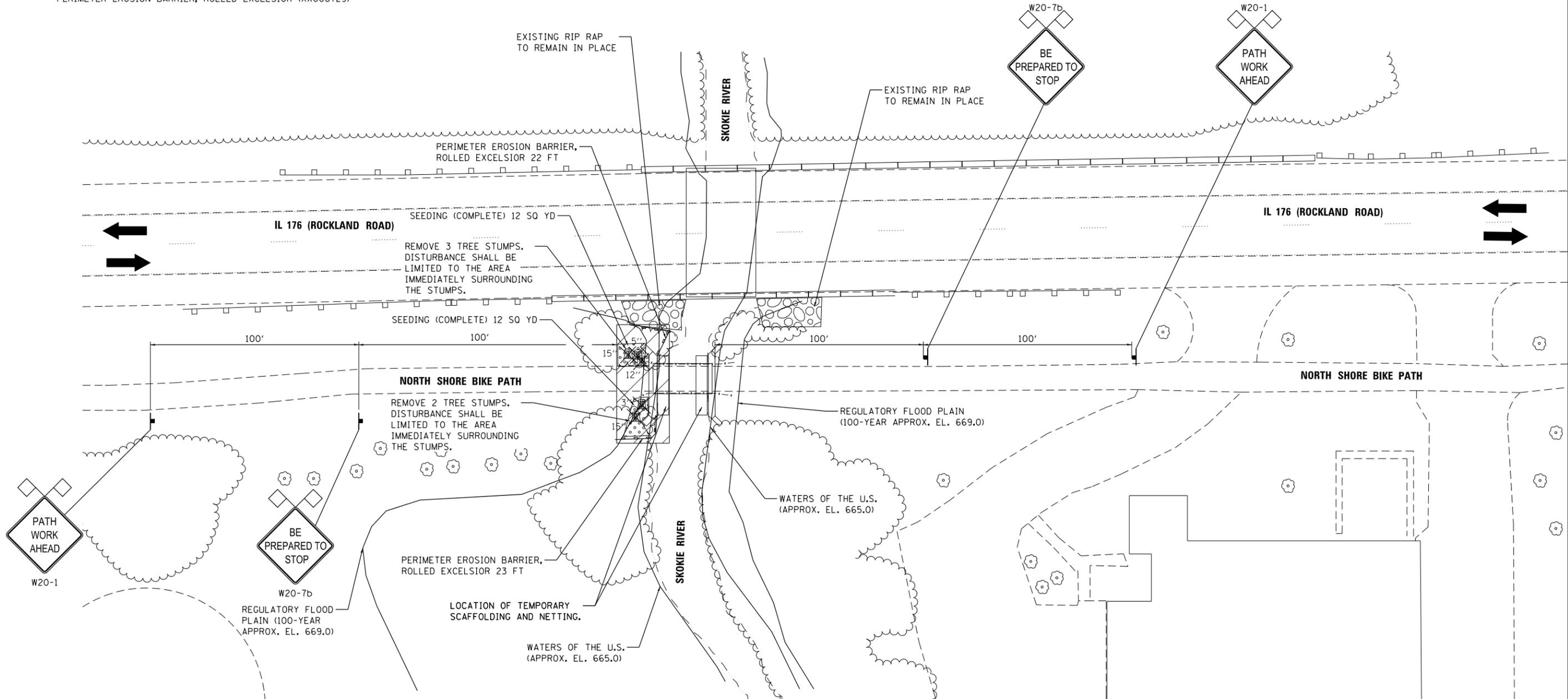
1. LOCATE SIGNAGE PER PLANS.
2. MAKE REPAIRS TO BRIDGE ABUTMENT.
3. COMPLETE SEEDING AND LANDSCAPING.

**LEGEND:**

-  WORK ZONE
-  CONSTRUCTION SIGN ON PORTABLE SUPPORT
-  STUMP REMOVAL ONLY (X2010400)
-  SEEDING (COMPLETE) (XX006343)
-  PERIMETER EROSION BARRIER, ROLLED EXCELSIOR (XX006729)

**NOTES:**

1. TEMPORARY STORAGE OF THE FOLLOWING ITEMS WILL NOT BE ALLOWED WITHIN THE REGULATORY FLOOD PLAIN DURING THE MAINTENANCE ACTIVITY; UNSECURED BUOYANT MATERIALS, FLAMMABLE LIQUIDS, CHEMICALS, EXPLOSIVES, POLLUTANTS, OTHER HAZARDOUS MATERIALS, AND LANDSCAPE WASTE.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING ALL NECESSARY EQUIPMENT AND DEVICES NECESSARY TO PREVENT MATERIAL FROM BEING DEPOSITED INTO THE WATERWAY DURING THE MAINTENANCE OPERATION. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO SCAFFOLDING, NETTING, SILTFENCE, FLOATING PLATFORM ETC.
3. THE CONTRACTOR SHALL MAINTAIN FULL WIDTH OF THE NORTH SHORE BIKE PATH OPEN AT ALL TIMES AND PROHIBIT ANY CONSTRUCTION VEHICLE OR EQUIPMENT ON THE BRIDGE.
4. NO FILL SHALL BE PLACED WITHIN THE WATERS OF THE U.S. (ORDINARY HIGH WATER MARK ELEV = 665.0')
5. ACCESS FOR CONSTRUCTION IS FROM COMMERCIAL DRIVEWAYS ON EITHER SIDE OF IL 176 GUARDRAIL.
6. DIMENSIONS ARE NOT TO SCALE.
7. REMOVE SIGNS WHEN WORKERS ARE NOT PRESENT.



REVISIONS / REMARKS		DATE	BY	PLOT DATE
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		/ /		PLOTTED BY: christopher.stanuch

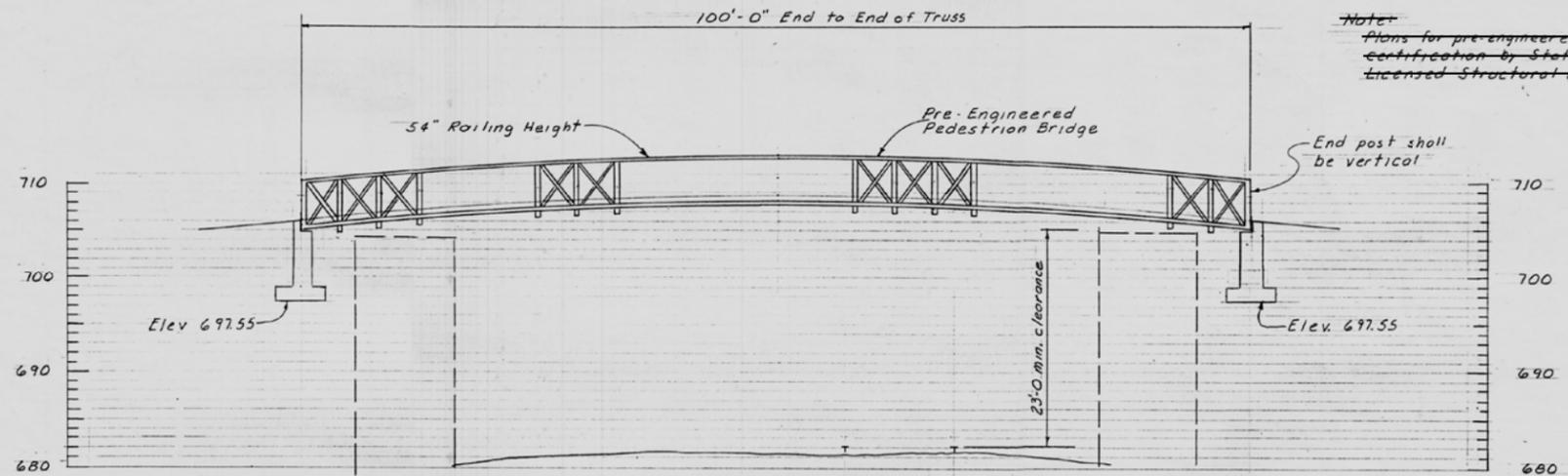
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**NORTH SHORE BIKE PATH OVER SKOKIE RIVER  
MOT, EROSION CONTROL AND LANDSCAPING PLAN**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	252	16-00999-25-BR	10	33

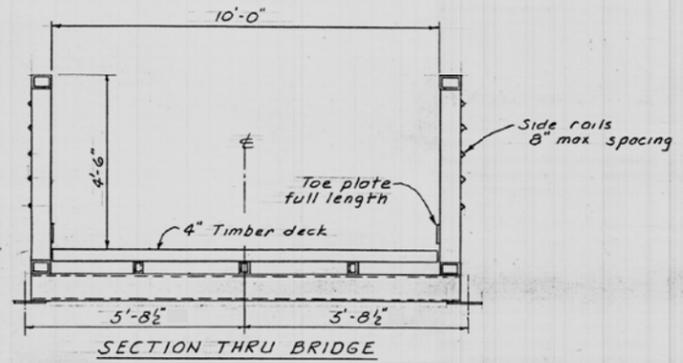
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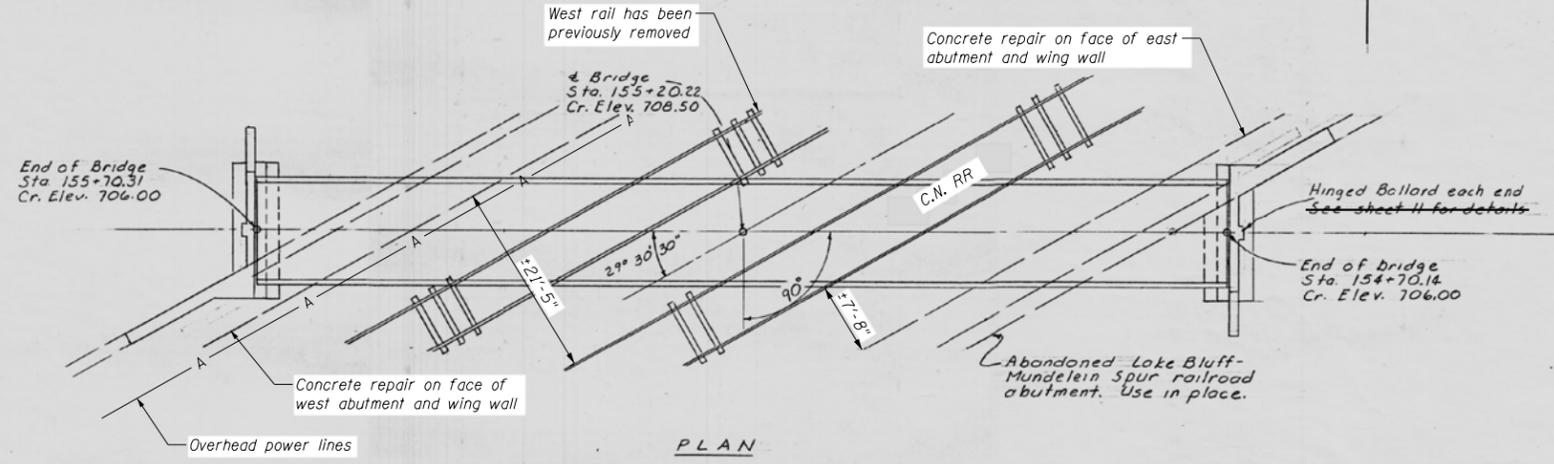
Note:  
Plans for pre-engineered bridge require certification by State of Illinois Licensed Structural Engineer.

End post shall be vertical

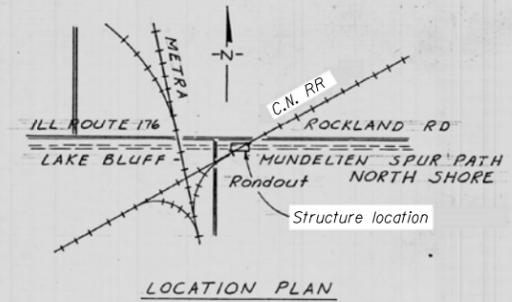
ELEVATION



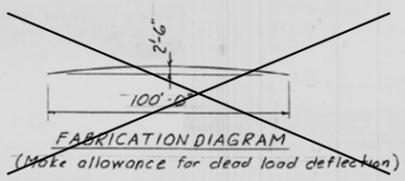
SECTION THRU BRIDGE



PLAN



LOCATION PLAN



FABRICATION DIAGRAM  
(Make allowance for dead load deflection)

~~NORTH SHORE PATH  
BUILT 199 - BY  
LAKE COUNTY  
SECTION 92-00223-00-BR  
STR. NO. 041  
LETTERING FOR NAME PLATE  
See Std. 2113~~

Note:  
Excavation required to construct the abutments shall be considered incidental to Class X Concrete.

DESIGN STRESSES  
 $f_s = 27,000$  p.s.i. (Structural)  
 $f_c = 4,400$  p.s.i. (Class X Concrete)  
 $f_s = 20,000$  p.s.i. (Reinforcement)  
 $n = 9$  (Class X Concrete)

Design Loading: 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.)  
 300 lbs./ft. Dead Load

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NORTH SHORE BIKE PATH OVER C.N. RR  
GENERAL PLAN AND ELEVATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	223	16-00999-25-BR	11	33

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
* Tree Removal (6 to 15 Units Diameter)	Unit	14
* Anti-Graffiti Protection System	Sq Ft	4,640
* Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special)	Sq Ft	3,859
* Structural Repair of Concrete (Depth Greater than 5 inches) (Special)	Sq Ft	558

\* Special Provision

**INDEX OF SHEETS - NORTH SHORE BIKE PATH OVER C.N. RR**

11	General Plan and Elevation
12	Index of Sheets, Notes and Total BOM
13	Plan and Profile - For Information Only
14	Pedestrian Bridge Abutments - For Information Only
15	Abutment Repair

**SEQUENCE OF CONSTRUCTION**

1. The Contractor shall coordinate construction activities with Lake County Division of Transportation and Canadian National Railroad. The Contractor shall contact the Engineer at least 72 hours in advance of beginning work.
2. Maintain two way traffic on the trail on the bridge. Pedestrians and bike riders shall be protected from work activities and debris.
3. Perform structural repair of concrete to the abutments per plans.

**GENERAL NOTES**

1. 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.
2. Contractor shall not scale dimensions from the contract plans for construction purposes. Scales shown are for information only.
3. 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.
4. 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.
5. 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.
6. No welding of reinforcement bars shall be performed.
7. 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.
8. Only those trees designated by the Engineer shall be removed. The Contractor shall protect all remaining trees from damage due to his operations.
9. Heavy construction equipment shall be prohibited on the pedestrian bridge.

REVISIONS / REMARKS				
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		/ /		9/14/2016
		/ /		DSGNR/CHECKED BY: CRS/MGH
		/ /		PLOTTED BY: christopher.stanuch


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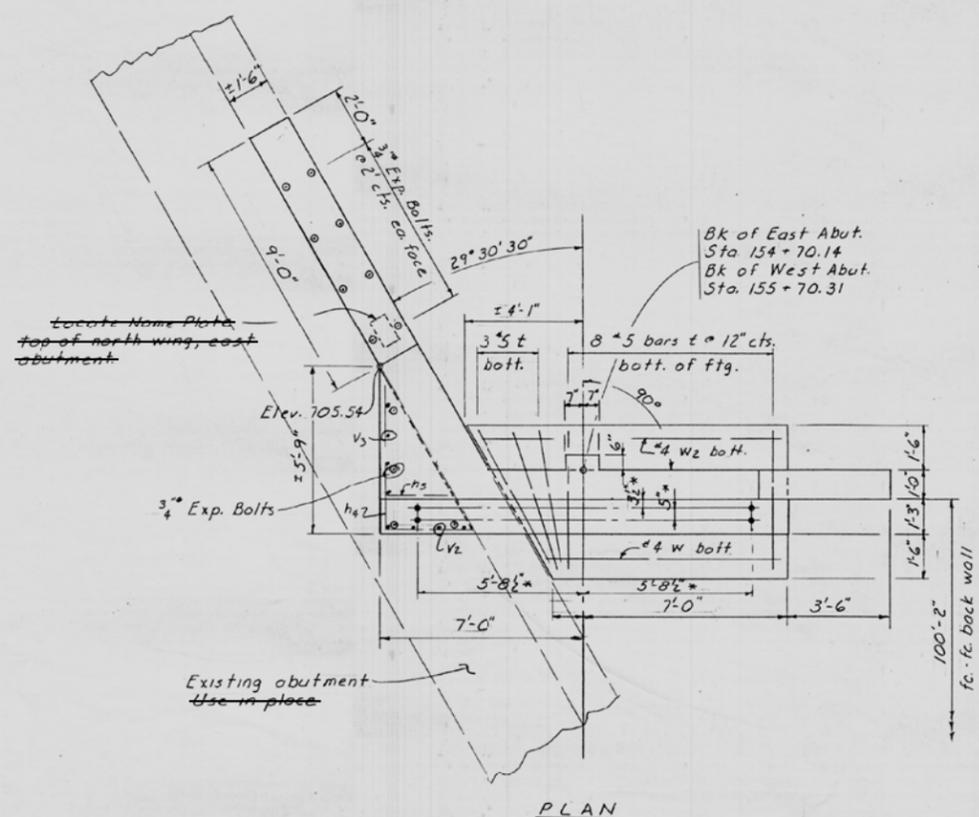


**NORTH SHORE BIKE PATH OVER C.N. RR**

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

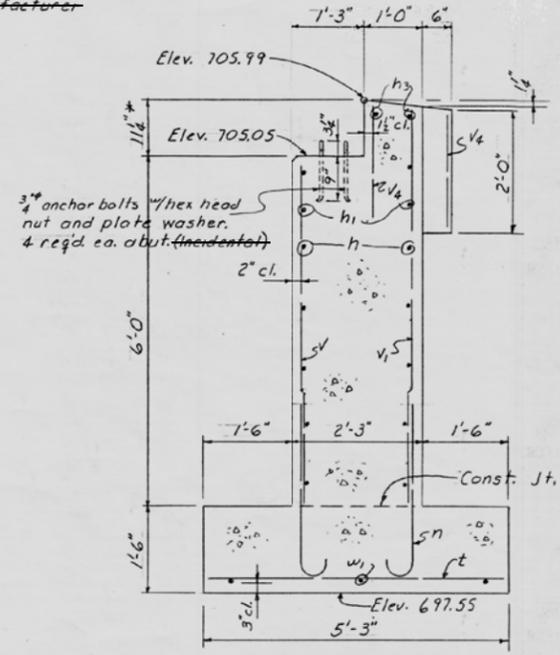
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--	223	16-00999-25-BR	12	33



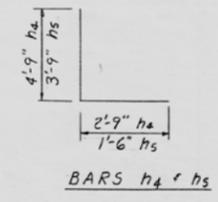
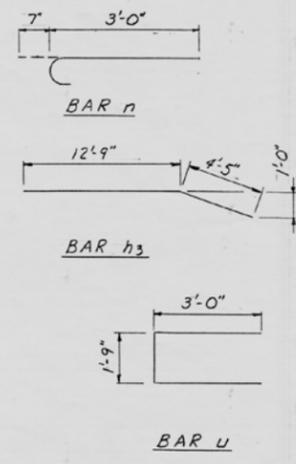


\* Dimensions to be verified by Manufacturer

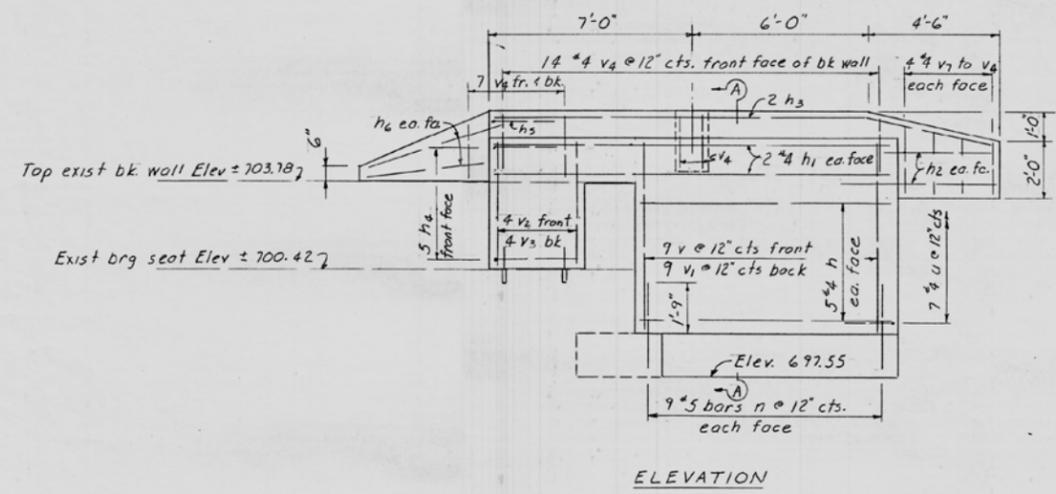
**Note**  
 Expansion bolts shall be self-drilling or other approved anchors with hooked bolts extending 9" into new concrete.  
 Anchor bolts, hex head nuts and plate washers for bridge and ballards shall be hot dipped galvanized.  
 Cost of anchor bolts included in Furnishing and Erecting Pre-Engineered Pedestrian Bridge and Ballards.



SECTION A-A



BARS h4 & h5



ELEVATION

**FOR INFORMATION ONLY**

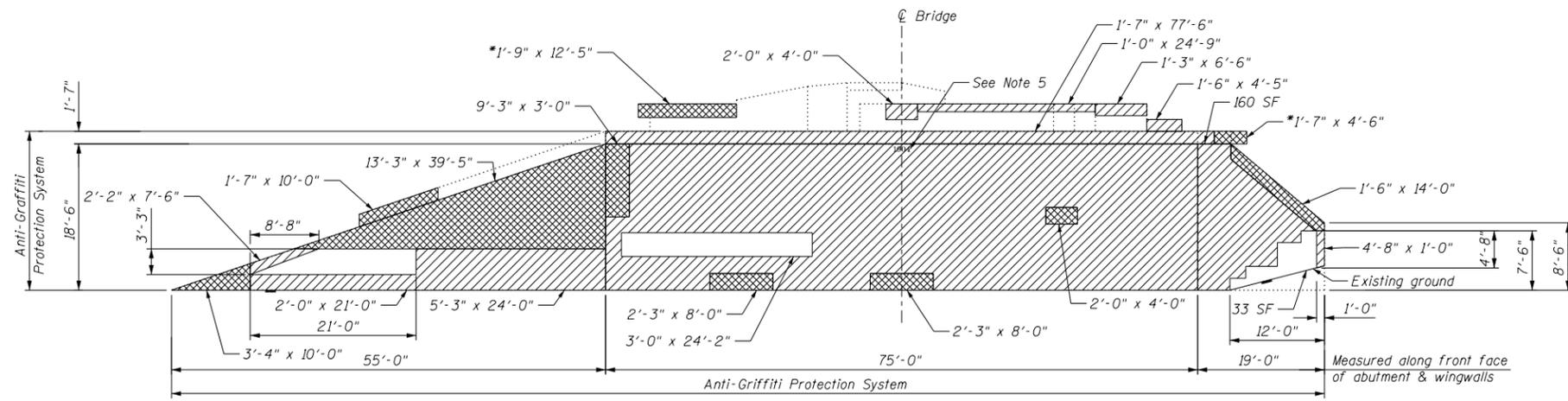
REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
				9/14/2016

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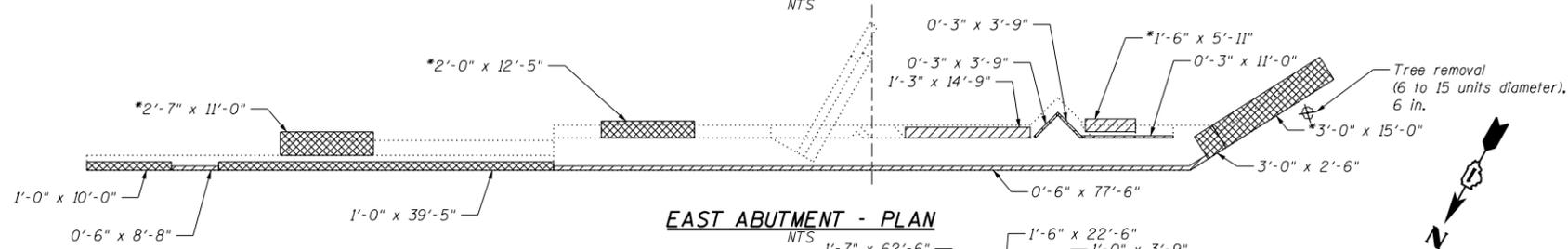
**NORTH SHORE BIKE PATH OVER C.N. RR**  
**PEDESTRIAN BRIDGE ABUTMENTS - FOR INFORMATION ONLY**

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--	223	16-00999-25-BR	14	33



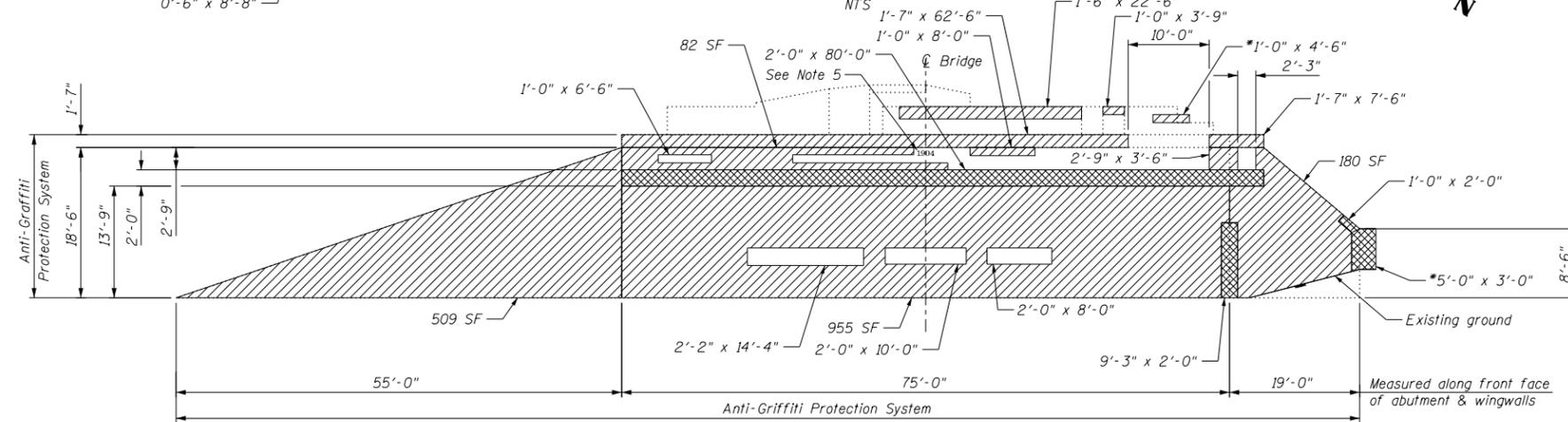
**EAST ABUTMENT - ELEVATION**

(Looking East)  
NTS



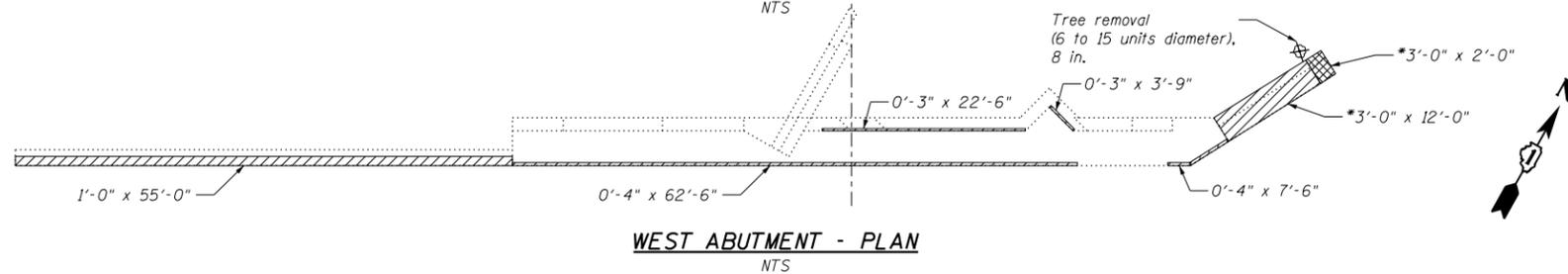
**EAST ABUTMENT - PLAN**

NTS



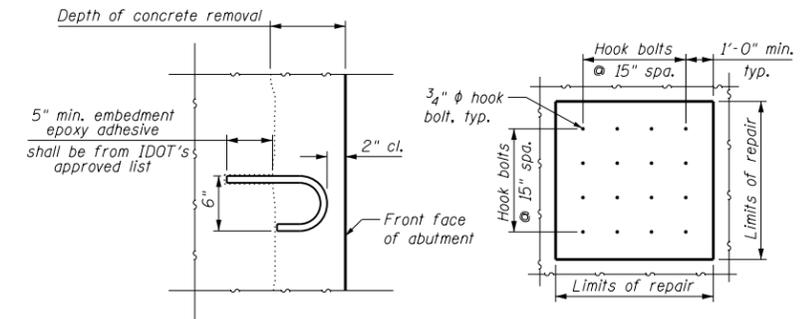
**WEST ABUTMENT - ELEVATION**

(Looking West)  
NTS



**WEST ABUTMENT - PLAN**

NTS



**HOOK BOLT REPAIR DETAIL**

See note 2

**LEGEND**

- Structural repair of concrete (Depth Greater than 5 inches) (Special)
- Structural repair of concrete (Depth Equal to or Less than 5 inches) (Special)

**Notes:**

1. The majority of the east and west abutments are in need of concrete repair.
2. Hook bolts shall be installed where the depth of concrete removal 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.) (Special).
3. Where depth of concrete removal is less than 6 inches and the area of repair is greater than 100 sq. ft. high performance shotcrete is recommended for repair.
4. Repair area and exposed reinforcement shall be blast cleaned to provide an oil, dirt, and loose material free surface.
5. Protect existing "1904" imprint during concrete repair work. If during the process of the concrete repair work the "1904" is damaged, the new concrete shall have "1904" imprinted into it. The text shall match the existing font and size, and the cost shall be included in Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special).
6. After the repair is completed, apply an Anti-Grffiti Protection System on the front faces of abutment walls and wingwalls as designated on the plan.
7. 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.
- \* 8. Hatched area outside member denotes the deterioration continues onto the adjacent face of that member.

**BILL OF MATERIAL**

Description	Unit	Quantity
Tree Removal (6 to 15 Units Diameter)	Unit	14
Anti-Grffiti Protection System	Sq Ft	4,640
Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special)	Sq Ft	3,859
Structural Repair of Concrete (Depth Greater than 5 inches) (Special)	Sq Ft	558

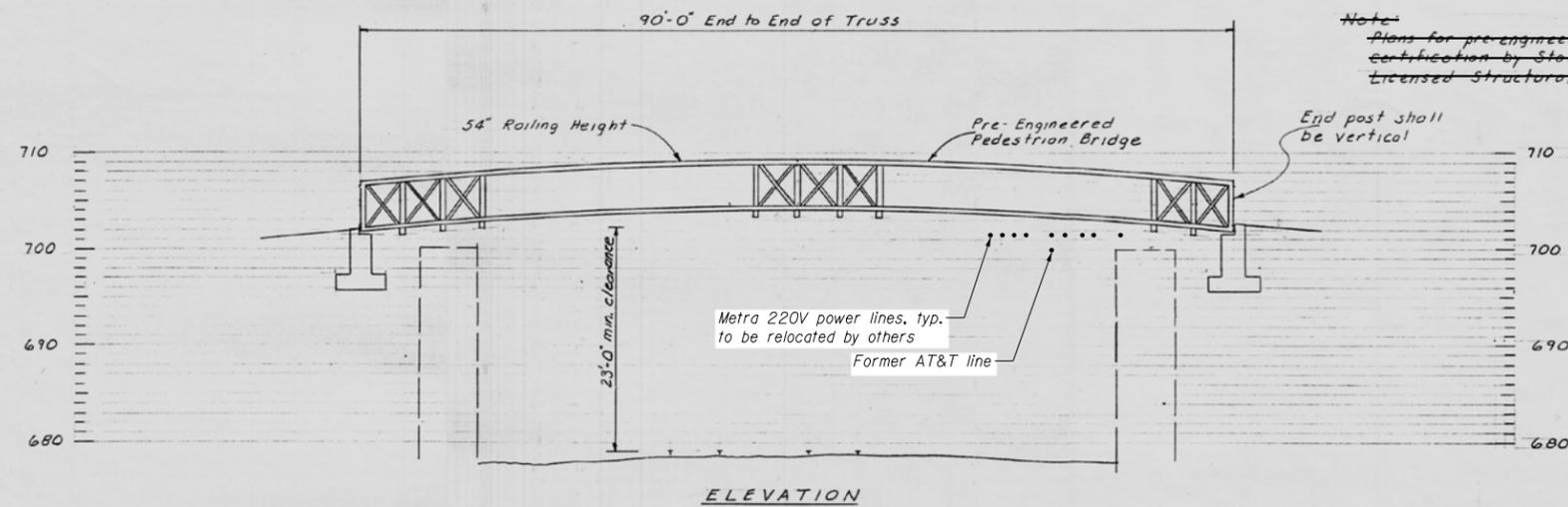
REVISIONS / REMARKS		DATE	BY	PLOT DATE:	9/14/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/MGH
		/ /		PLOTTED BY:	christopher.stanuch

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**NORTH SHORE BIKE PATH OVER C.N. RR**  
**ABUTMENT REPAIR**

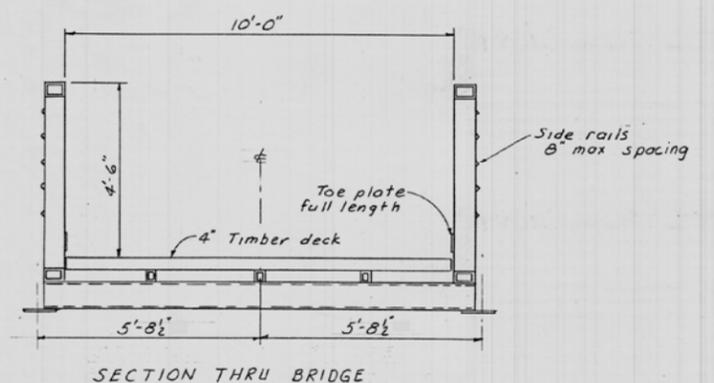
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--	223	16-00999-25-BR	15	33



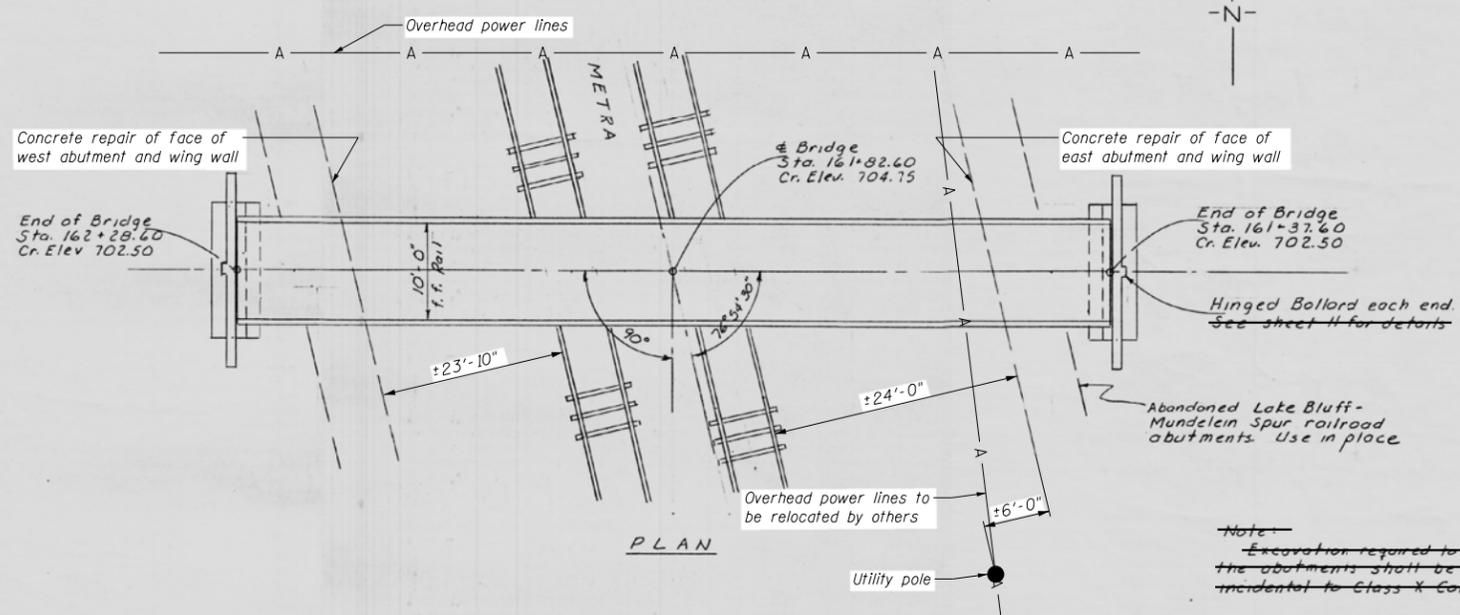
Note:  
Plans for pre-engineered bridge require certification by State of Illinois Licensed Structural Engineer.

End post shall be vertical

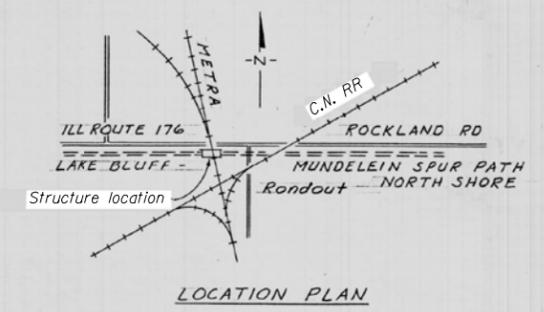
ELEVATION



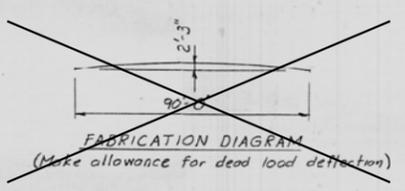
SECTION THRU BRIDGE



PLAN



LOCATION PLAN



FABRICATION DIAGRAM  
(Make allowance for dead load deflection)

~~NORTH SHORE PATH  
BUILT 199 BY  
LAKE COUNTY  
SECTION 12-00223-00-BR  
STR. NO. 044-  
LETTERING FOR NAME PLATE  
See Std. 2113~~

Note:  
Excavation required to construct the abutments shall be considered incidental to Glass & Concrete.

DESIGN STRESSES  
 $f_s = 27,000$  p.s.i. (Structural)  
 $f_c = 4,000$  p.s.i. (Glass & Concrete)  
 $f_s = 20,000$  p.s.i. (Reinforcement)  
 $n = 9$  (Glass & Concrete)

Design Loading: 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.)  
 300 lbs./ft. Dead Load

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /	CRS/MPB	
		/ /	christopher.stanuch	

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



**NORTH SHORE BIKE PATH OVER METRA RR**  
GENERAL PLAN AND ELEVATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	223	16-00999-25-BR	16	33

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
* Tree Removal (6 to 15 Units Diameter)	Unit	14
* Anti-Graffiti Protection System	Sq Ft	2,970
* Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special)	Sq Ft	2,223
* Structural Repair of Concrete (Depth Greater than 5 inches) (Special)	Sq Ft	382

\* Special Provision

**INDEX OF SHEETS - NORTH SHORE BIKE PATH OVER METRA RR**

16	General Plan and Elevation
17	Index of Sheets, Notes and Total BOM
18	Plan and Profile - For Information Only
19	Pedestrian Bridge Abutments - For Information Only
20	Abutment Repair

**SEQUENCE OF CONSTRUCTION**

- The Contractor shall coordinate construction activities with Lake County Division of Transportation and Metra Railroad. The Contractor shall contact the Engineer at least 72 hours in advance of beginning work.
- 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.

**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.
- 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.
- Only those trees designated by the Engineer shall be removed. The Contractor shall protect all remaining trees from damage due to his operations.
- Power lines going under the pedestrian bridge west of the East Abutment are operated by Metra RR. These lines shall be relocated by Metra RR prior to beginning work. The Contractor shall coordinate with Tim Pitzen of Metra RR at 312-322-6924.
- Heavy construction equipment shall be prohibited on the pedestrian bridge.

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	PLOT DATE:	9/14/2016
		/ /		DSGNER/CHECKED BY:	CRS/MGH
		/ /		PLOTTED BY:	christopher.stanuch


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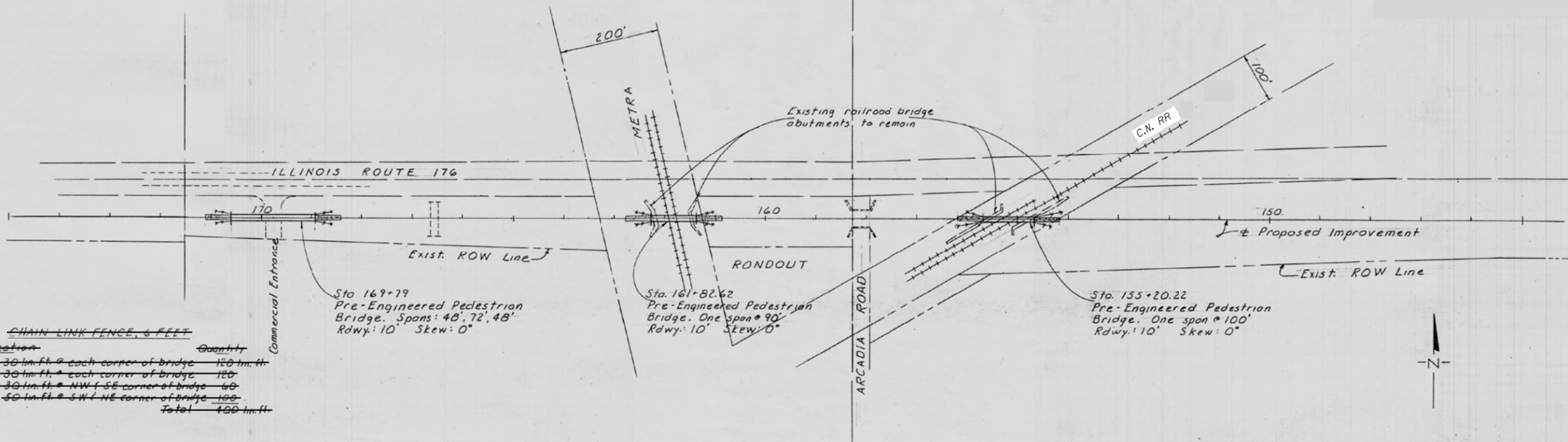
**NORTH SHORE BIKE PATH OVER METRA RR**

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

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	223	16-00999-25-BR	17	33

NE 1/4, NW 1/4, SEC. 24, T44N, R11E, 3rd. P.M.

NW 1/4, NE 1/4, SEC. 24, T44N, R11E, 3rd. P.M.



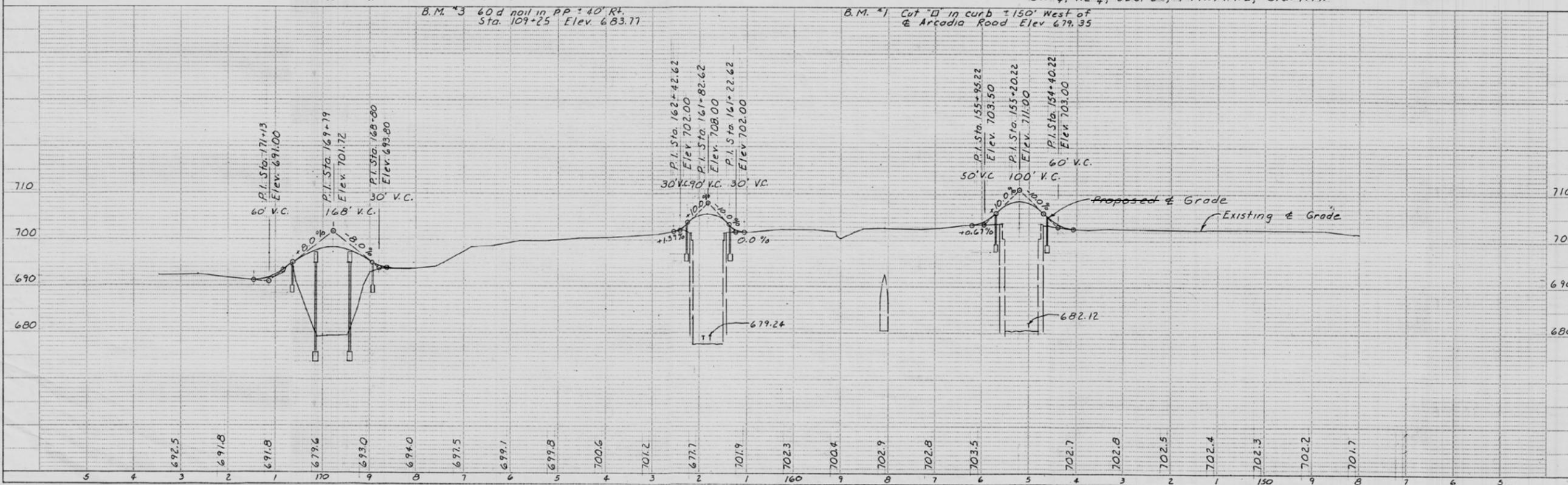
**CHAIN LINK FENCE, 6 FEET**

Location	Quantity
Entrance 30 lin. ft. @ each corner of bridge	120 lin. ft.
METRA 30 lin. ft. @ each corner of bridge	120
E.J.T.E. 30 lin. ft. @ NW & SE corner of bridge	60
50 lin. ft. @ SW & NE corner of bridge	100
<b>Total</b>	<b>400 lin. ft.</b>

DATE	
BY	
DESIGNED	
PLOTTED	
CHECKED	
DATE	
BY	
NO.	

SE 1/4, NW 1/4, SEC. 24, T44N, R11E, 3rd. P.M.

SW 1/4, NE 1/4, SEC. 24, T44N, R11E, 3rd. P.M.



DATE	
BY	
DESIGNED	
PLOTTED	
CHECKED	
DATE	
BY	
NO.	

PLATE 1-SINGLE PLAN AND PROFILE-FULL DOT  
PRINTED IN U.S.A.

**FOR INFORMATION ONLY**

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	9/14/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/MPB
		/ /		PLOTTED BY:	christopher.stanuch

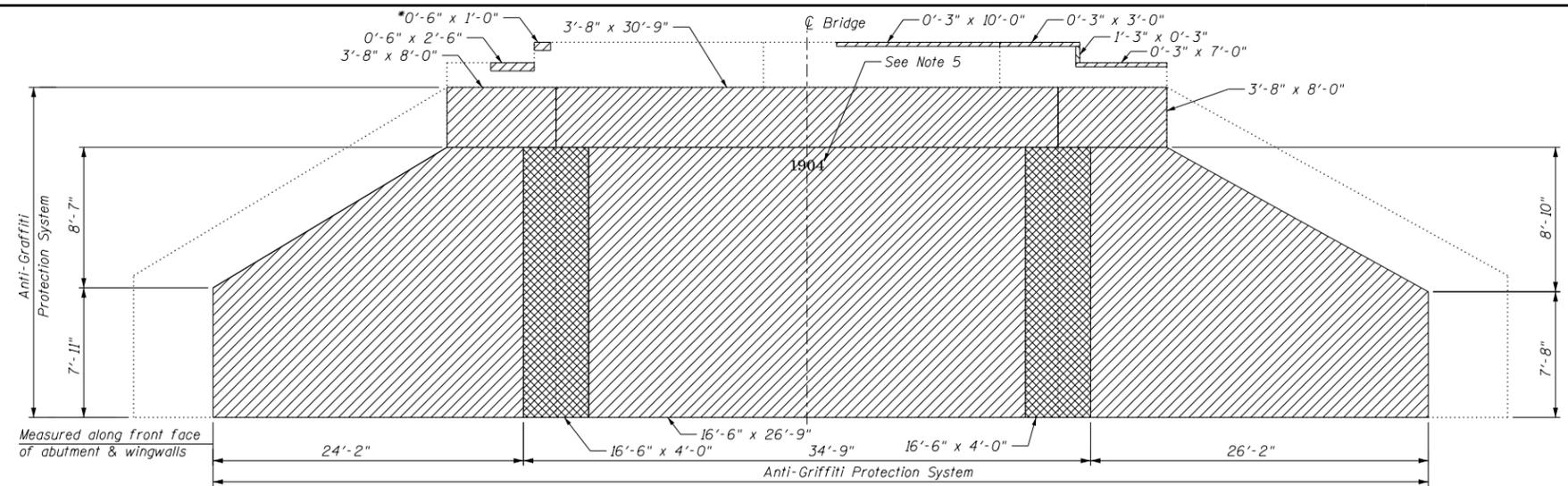
amec  
foster  
wheeler  
8745 W. Higgins Road Suite 300  
Chicago, IL 60631  
(773) 693-6030



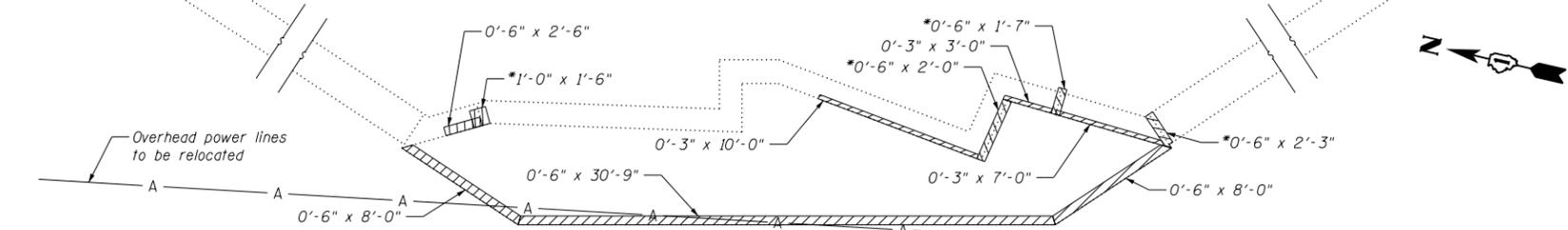
NORTH SHORE BIKE PATH OVER METRA RR		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
PLAN AND PROFILE - FOR INFORMATION ONLY		--	223	16-00999-25-BR	18	33

FILE NAME: Metro\_RR-003-PlanProfile.dgn

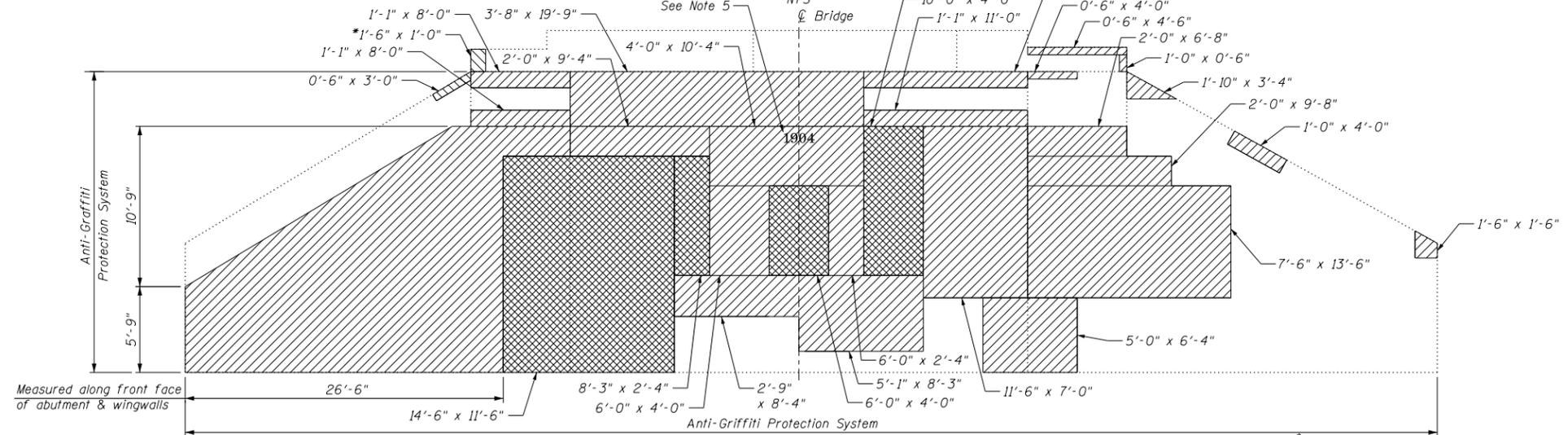




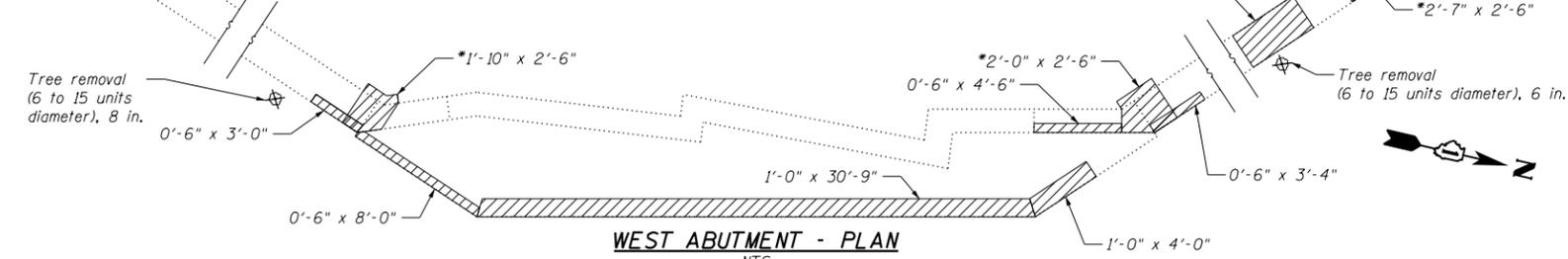
**EAST ABUTMENT - ELEVATION**  
(Looking East) NTS



**EAST ABUTMENT - PLAN**  
NTS



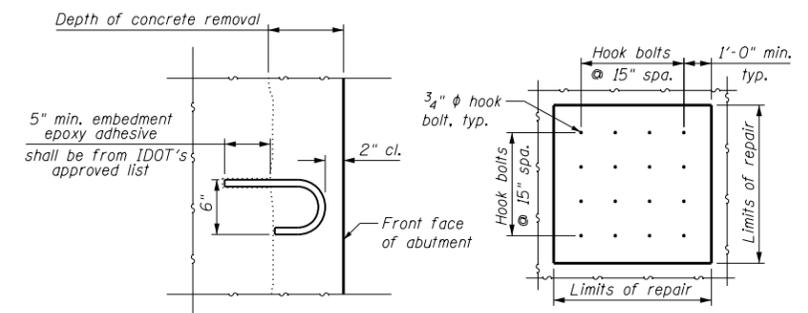
**WEST ABUTMENT - ELEVATION**  
(Looking West) NTS



**WEST ABUTMENT - PLAN**  
NTS

**Notes:**

1. The majority of the east and west abutments are in need of concrete repair.
2. Hook bolts shall be installed where the depth of concrete removal 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.) (Special).
3. Where depth of concrete removal is less than 6 inches and the area of repair is greater than 100 sq. ft. high performance shotcrete is recommended for repair.
4. Repair area and exposed reinforcement shall be blast cleaned to provide an oil, dirt, and loose material free surface.
5. Protect existing "1904" imprint during concrete repair work. If during the process of the concrete repair work the "1904" is damaged, the new concrete shall have "1904" imprinted into it. The text shall match the existing font and size, and the cost shall be included in Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special).
6. After the repair is completed, apply an Anti-Graffiti Protection System on the front faces of abutment walls and wingwalls as designated on the plan.
7. 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.
- \* 8. Hatched area outside member denotes the deterioration continues onto the adjacent face of that member.



**HOOK BOLT REPAIR DETAIL**  
See note 2

**LEGEND**

- Structural repair of concrete (Depth Greater than 5 inches) (Special)
- Structural repair of concrete (Depth Equal to or Less than 5 inches) (Special)

**BILL OF MATERIAL**

Description	Unit	Quantity
Tree Removal (6 to 15 Units Diameter)	Unit	14
Anti-Graffiti Protection System	Sq Ft	2,970
Structural Repair of Concrete (Depth Equal to or Less than 5 inches) (Special)	Sq Ft	2,223
Structural Repair of Concrete (Depth Greater than 5 inches) (Special)	Sq Ft	382

REVISIONS / REMARKS		DATE	BY	PLLOT DATE:	9/14/2016
NO.	DESCRIPTION	/ /	/ /	DSGMR/CHECKED BY:	CRS/MGH
		/ /	/ /	PLOTTED BY:	christopher.stanuch

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



**NORTH SHORE BIKE PATH OVER METRA RR**  
**ABUTMENT REPAIR**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	223	16-00999-25-BR	20	33

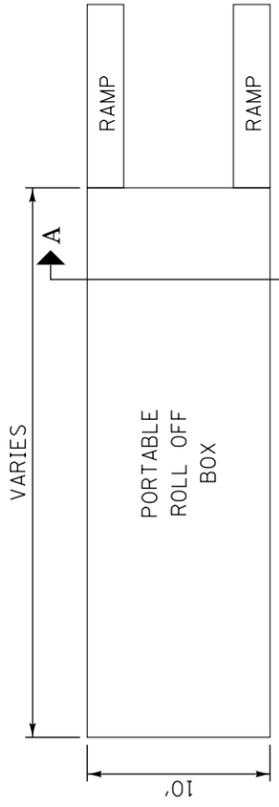
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	PLOT DATE:	9/14/2016
		/ /		DSGNR/CHECKED BY:	CRS/
		/ /		PLOTTED BY:	christopher.stanuch


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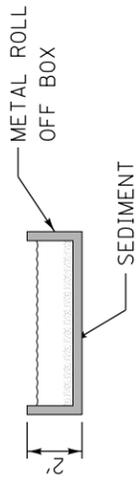

**LakeCounty**  
 Division of Transportation

**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**LCDOT STANDARDS AND DETAILS**

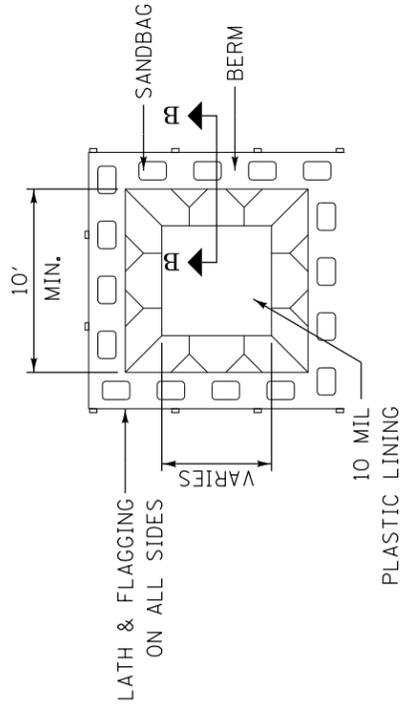
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--	VAR	16-00999-25-BR	21	33



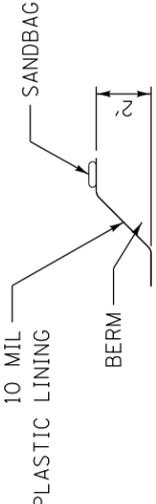
PLAN VIEW



SECTION A-A



PLAN VIEW



SECTION B-B

NOT TO SCALE

**NOTES:**

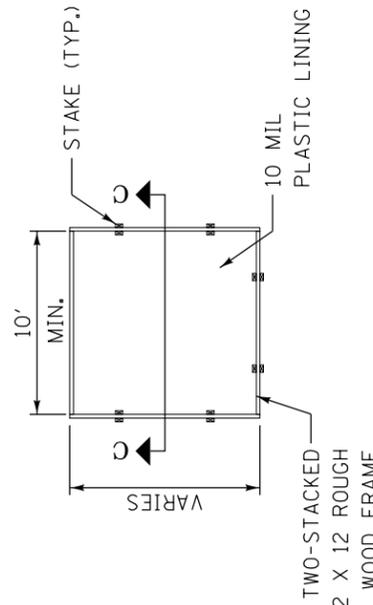
- ACTUAL LAYOUT DETERMINED IN FIELD.
- OTHER WASHOUT DESIGNS MAY BE USED IF APPROVED BY THE ENGINEER.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

LC4202

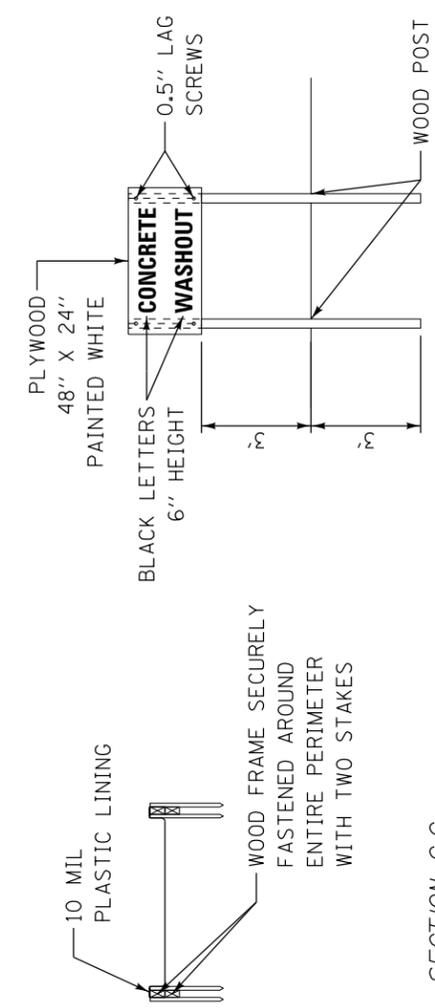
APPROVED BY: MGZ  
DATE: March 17, 2008

**LakeCounty**  
Division of Transportation

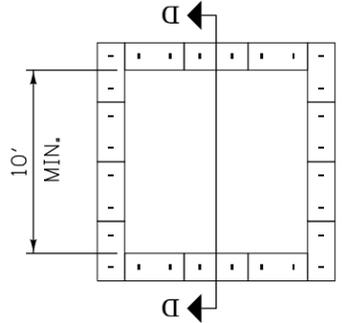
**CONCRETE WASHOUT FACILITIES**  
SHEET 1 OF 2



PLAN VIEW



SECTION C-C



PLAN VIEW



SECTION D-D

NOT TO SCALE

**NOTES:**

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

LC4202

APPROVED BY: MGZ  
DATE: March 17, 2008

**LakeCounty**  
Division of Transportation

**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				9/14/2016		<b>LakeCounty</b> Division of Transportation		<b>NORTH SHORE BIKE PATH ABUTMENT REPAIRS</b>				ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS	
NO.	DESCRIPTION	DATE	BY	PLOT DATE	DSGNER/CHECKED BY			CRS/TC	<b>IDOT HIGHWAY STANDARDS</b>				--	VAR	16-00999-25-BR	22	33
		/ /			PLOTTED BY:			christopher.stanuch									

<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	<u>DRAINAGE ITEMS</u>			
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	<u>BOUNDARIES ITEMS</u>			<u>EX</u>	<u>PR</u>	Paved Ditch		
Frame and Lid To Be Adjusted			A	Dashed Property Line				Aggregate Ditch			
Domestic Service Box To Be Adjusted			A	Solid Property/Lot Line				Pipe Underdrain			
Valve Vault To Be Adjusted			A	Section/Grant Line				Storm Sewer			
Special Adjustment			SP	Quarter Section Line				Flowline			
Item To Be Abandoned			AB	Quarter/Quarter Section Line				Ditch Check			
Item To Be Moved			M	County/Township Line				Headwall			
Item To Be Relocated			REL	State Line				Inlet			
Pavement Removal and Replacement				Iron Pipe Found		o		Manhole			
				Iron Pipe Set		•		Summit			
				Survey Marker		◐		Roadway Ditch Flow			
				Property Line Symbol		P		Swale			
				Same Ownership Symbol (Half Size)		↗		Catch Basin			
				Northwest Quarter Corner (Half Size)		◐		Culvert End Section			
				Section Corner (Half Size)		◐		Water Surface Indicator			
				Southeast Quarter Corner (Half Size)		◐		Riprap			

**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



**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

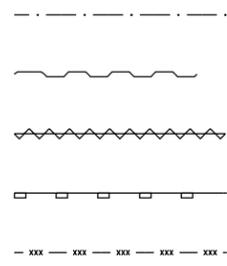
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	23	33

**EROSION & SEDIMENT CONTROL ITEMS**

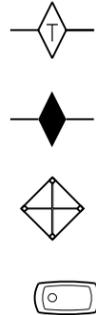
**EX**

**PR**

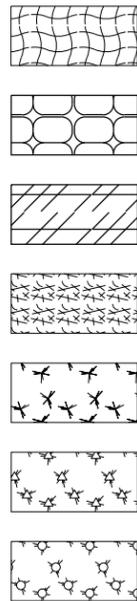
- Cleaning & Grading Limits
- Dike
- Erosion Control Fence
- Perimeter Erosion Barrier
- Temporary Fence



- 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

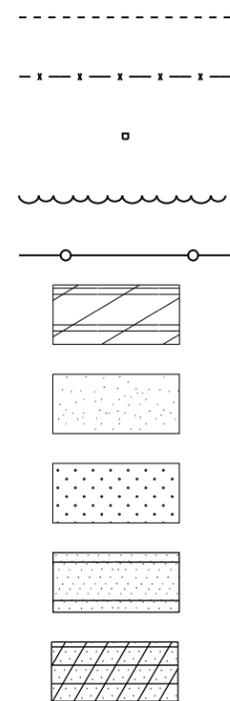


**LANDSCAPING ITEMS**

**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.)**

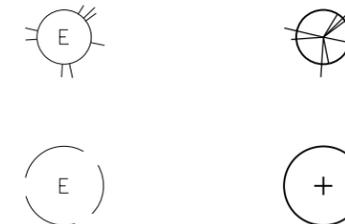
**EX**

**PR**

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



- Evergreen Tree
- Shade Tree

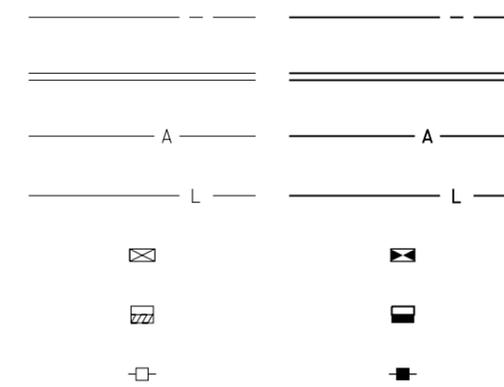


**LIGHTING**

**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				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /		CRS/TC
		/ /		christopher.stanuch

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



**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	24	33

**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**

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /		CRS/TC
		/ /		christopher.stanuch

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**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	25	33

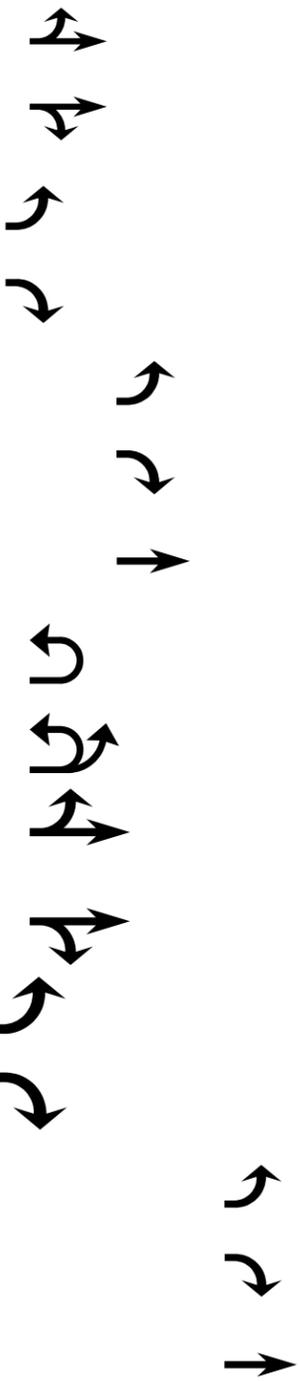
**PAVEMENT MARKINGS**  
**(contd.)**

- 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

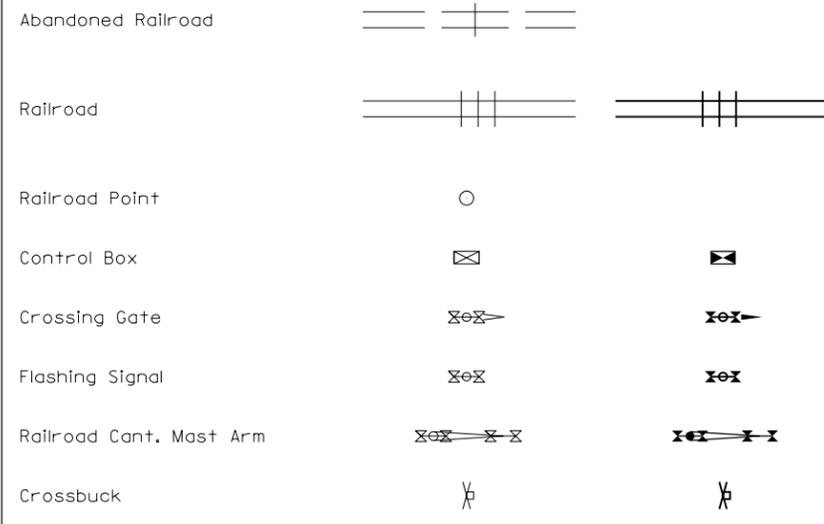
ONLY ONLY ONLY

ONLY ONLY ONLY

**RAILROAD ITEMS**

**EX**

**PR**



**REMOVAL ITEMS**

**EX**

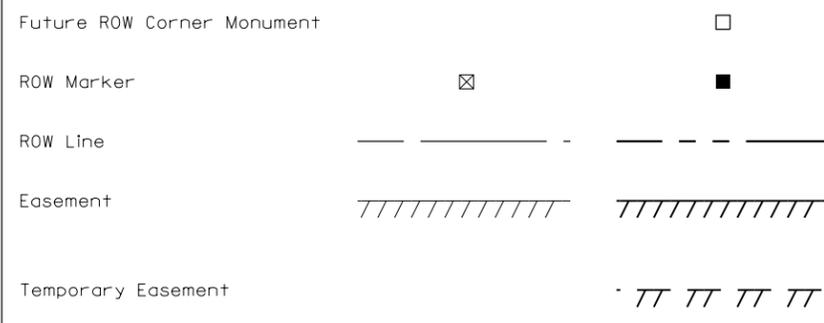
**PR**



**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
		/ /		9/14/2016
		/ /		CRS/TC
		/ /		PLOTTED BY: christopher.stanuch

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**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	26	33

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

	EX	PR
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**

	EX	PR
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**

	EX	PR
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**

	EX	PR
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.)

	EX	PR
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				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /		CRS/TC
		/ /		PLOTTED BY: christopher.stanuch

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Lake County  
Division of Transportation

**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	27	33

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

**EX**

**PR**

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



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



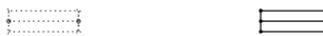
Detector Loop Large



Detector Loop Small



Detector Loop Quadrapole



**STANDARD SYMBOLS,  
ABBREVIATIONS  
AND PATTERNS**

(Sheet 7 of 8)

**STANDARD 000001-06**

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	9/14/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/TC
		/ /		PLOTTED BY:	christopher.stanuch

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**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	28	33

<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)

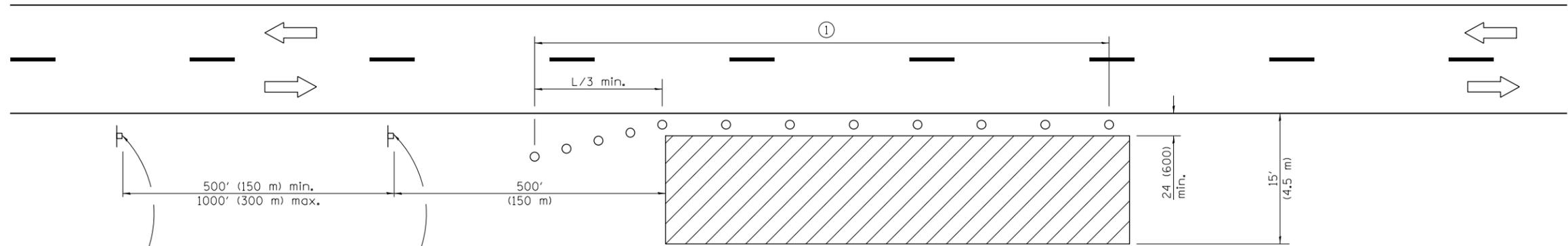
<b>STANDARD 000001-06</b>					
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS	
--	VAR	16-00999-25-BR	29	33	

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /		CRS/TC
		/ /		PLOTTED BY: christopher.stanuch

amec foster wheeler  
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Chicago, IL 60631  
(773) 693-6030



**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**



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

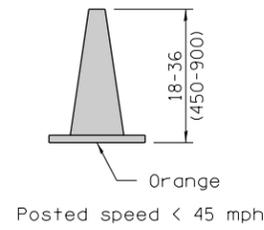
ISSUED 1-1-97

NO.	DESCRIPTION	DATE	BY	PLOT DATE:
				9/14/2016
				JAN/TC
				christopher.stanuch

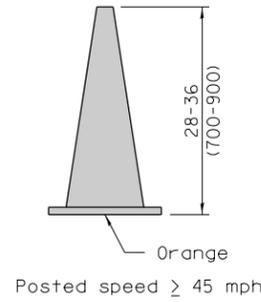
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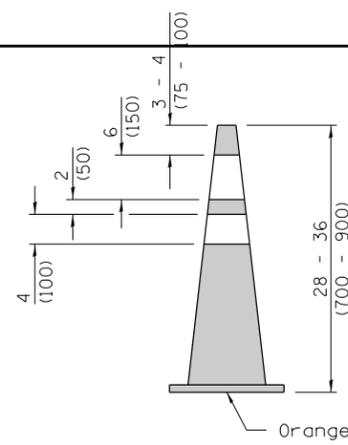
NORTH SHORE BIKE PATH ABUTMENT REPAIRS		ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
IDOT HIGHWAY STANDARDS		--	VAR	16-00999-25-BR	30	33



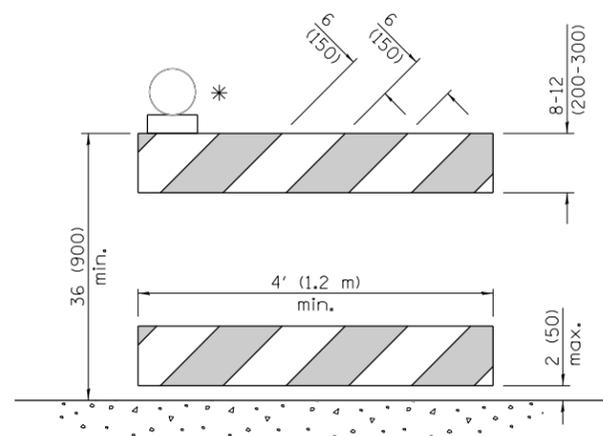
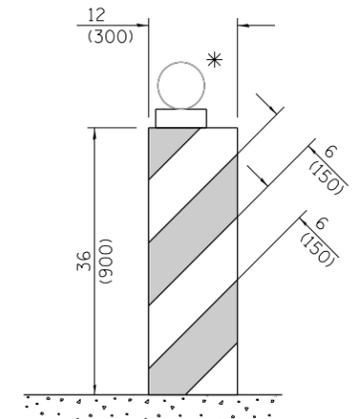
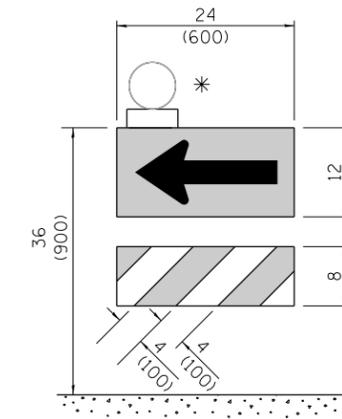
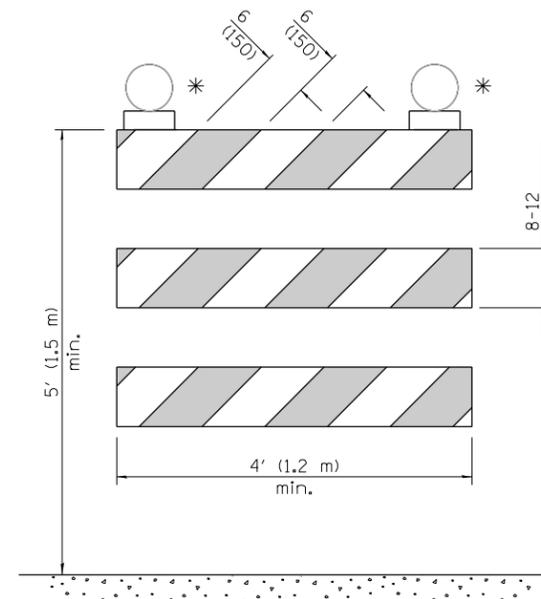
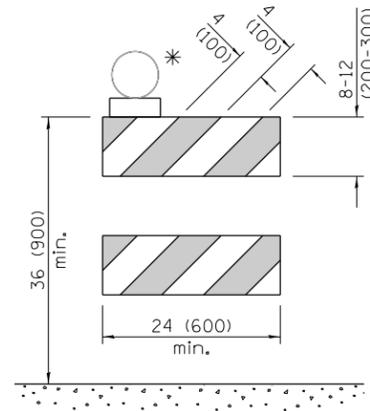
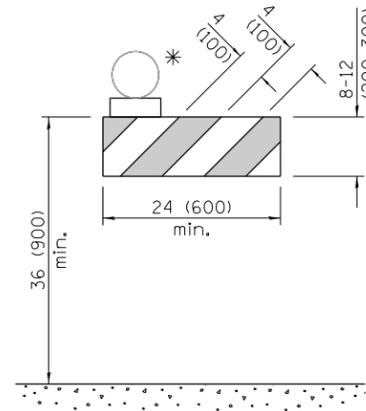
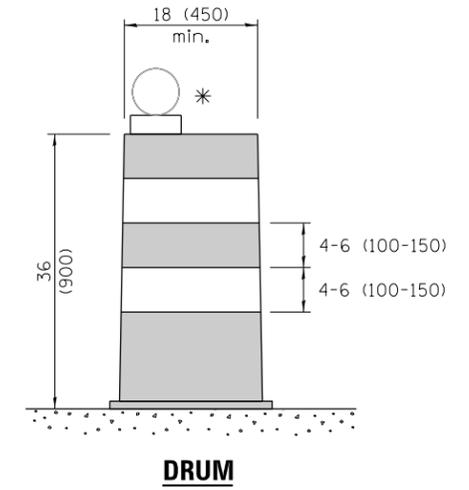
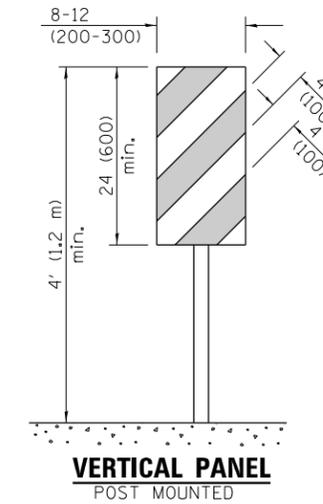
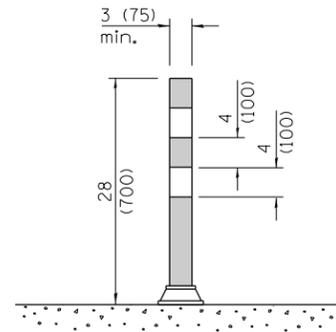
**CONE FOR DAYTIME**



**REFLECTORIZED CONE FOR NIGHTTIME**



**FLEXIBLE DELINEATOR**



\* 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)

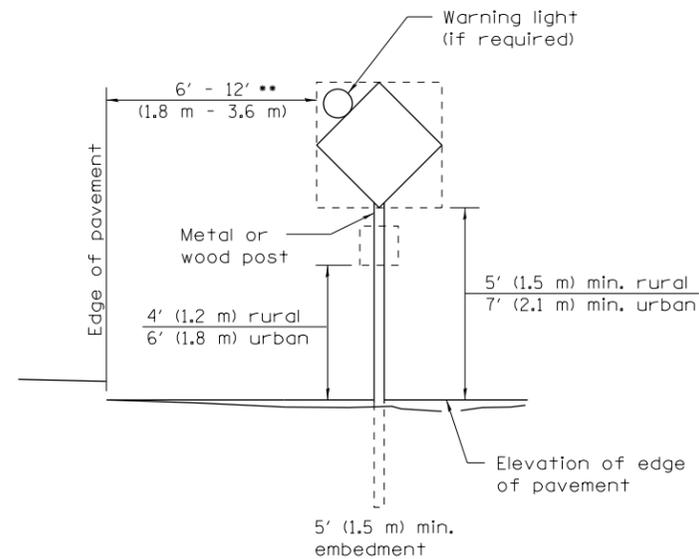
**STANDARD 701901-05**

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
		/ /		9/14/2016
		/ /		DSGNR/CHECKED BY: CRK/S
		/ /		PLOTTED BY: christopher.stanuch



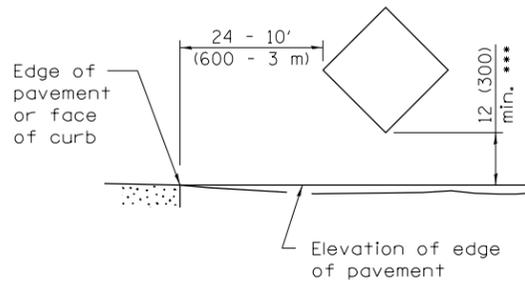
**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	31	33



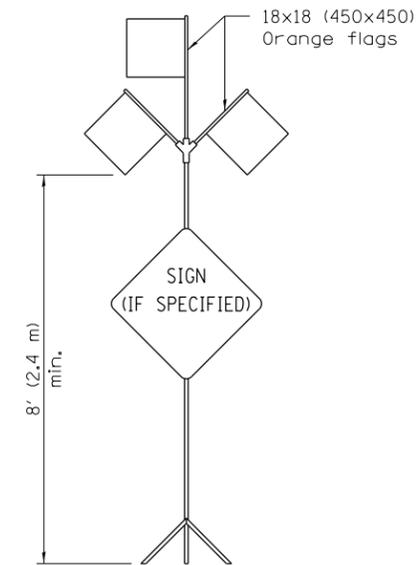
**POST MOUNTED SIGNS**

\*\* 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.

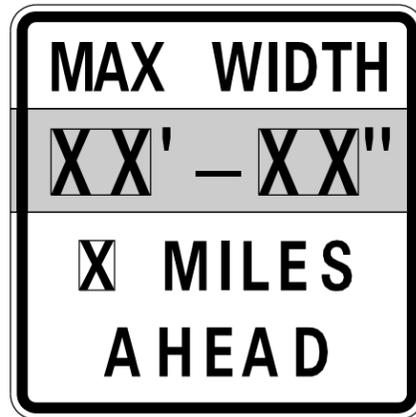


**SIGNS ON TEMPORARY SUPPORTS**

\*\*\* 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.



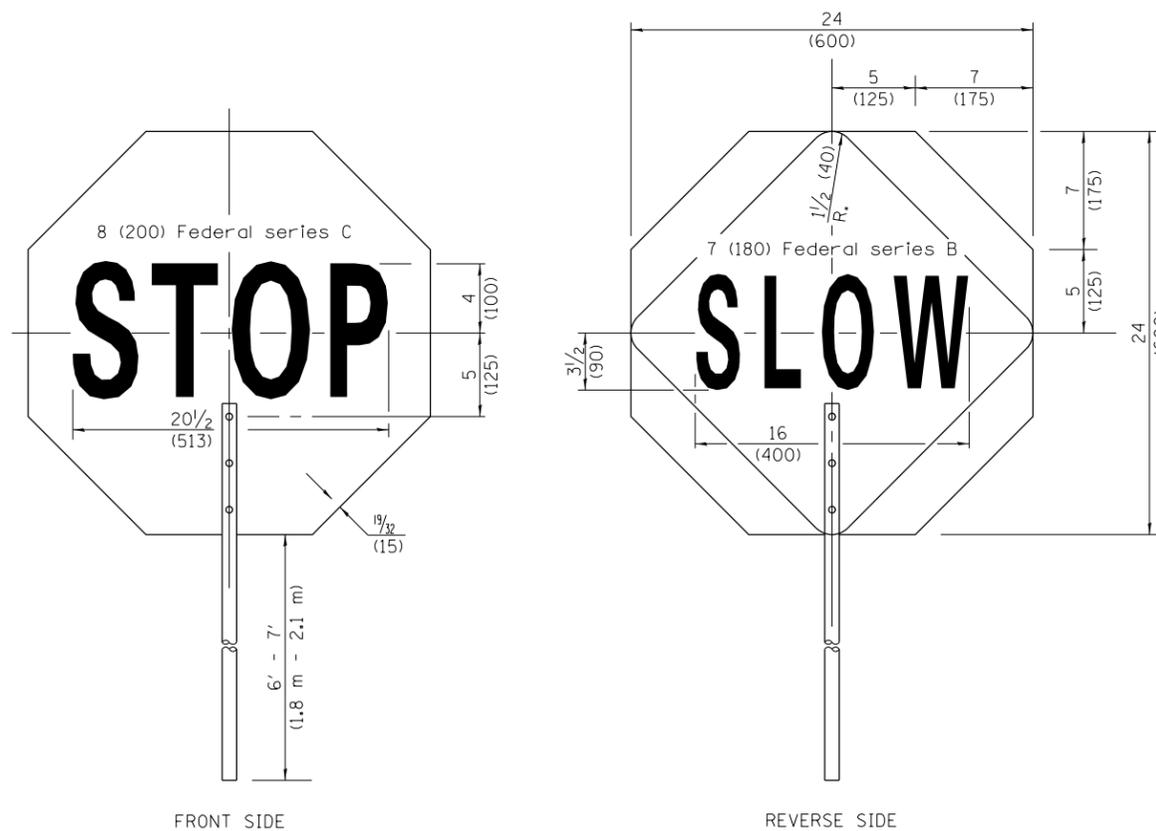
**HIGH LEVEL WARNING DEVICE**



W12-1103-4848

**WIDTH RESTRICTION SIGN**

XX'-XX" width and X miles are variable.



**FLAGGER TRAFFIC CONTROL SIGN**

ROAD CONSTRUCTION NEXT X MILES	END CONSTRUCTION
G20-1104(0)-6036	G20-1105(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**

WORK ZONE	W21-1115(0)-3618
SPEED LIMIT XX	R2-1-3648
PHOTO ENFORCED	R10-1108p-3618 ****
\$XXX FINE MINIMUM	R2-1106p-3618

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

END WORK ZONE SPEED LIMIT	G20-1103(0)-6036
---------------------------	------------------

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

**HIGHWAY CONSTRUCTION SPEED ZONE SIGNS**

\*\*\*\* R10-1108p shall only be used along roadways under the jurisdiction of the State.

**TRAFFIC CONTROL DEVICES**

(Sheet 2 of 3)

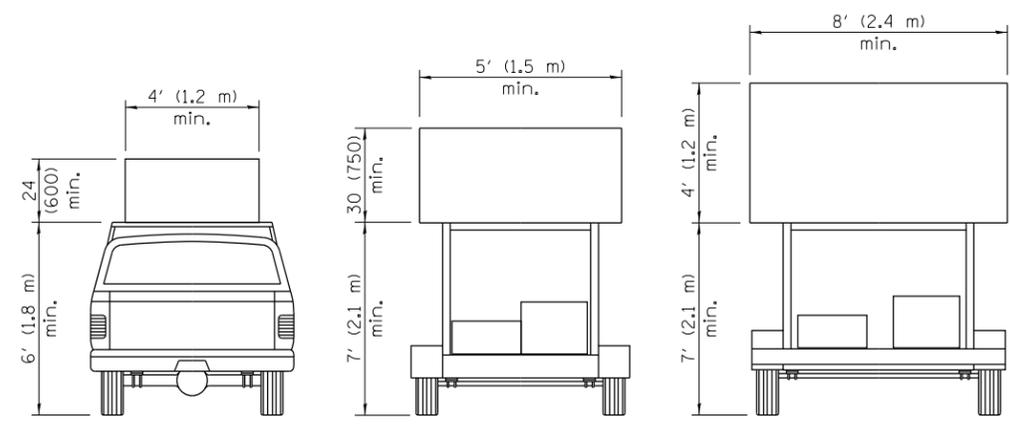
**STANDARD 701901-05**

REVISIONS / REMARKS		DATE	BY	PLOT DATE:	9/14/2016
NO.	DESCRIPTION	/ /		DSGNR/CHECKED BY:	CRS/
		/ /		PLOTTED BY:	christopher.stanuch



**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	32	33

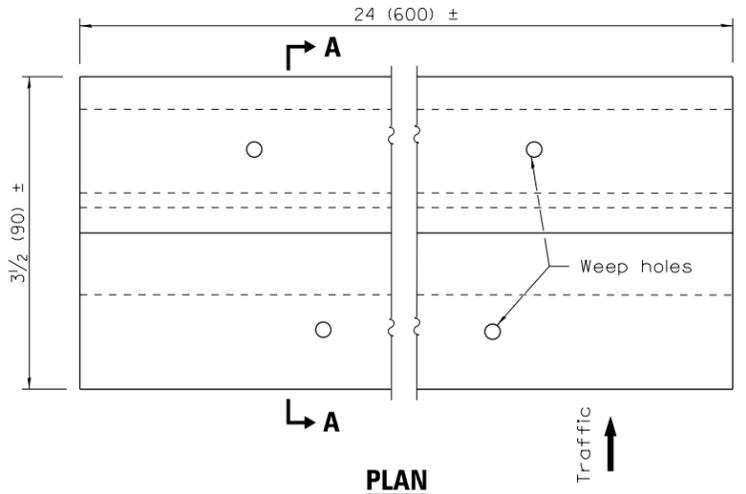


**TYPE A  
ROOF  
MOUNTED**

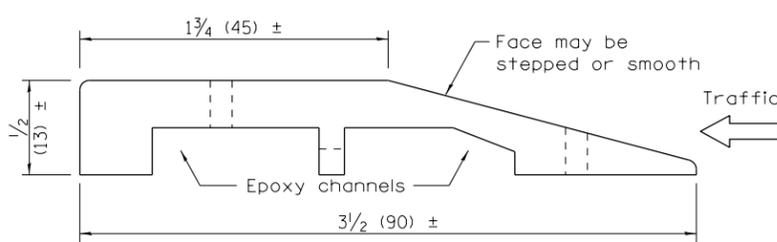
**TYPE B  
ROOF OR TRAILER  
MOUNTED**

**TYPE C  
TRAILER  
MOUNTED**

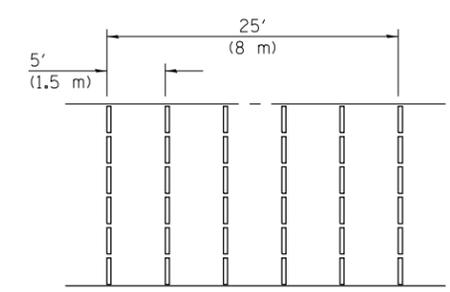
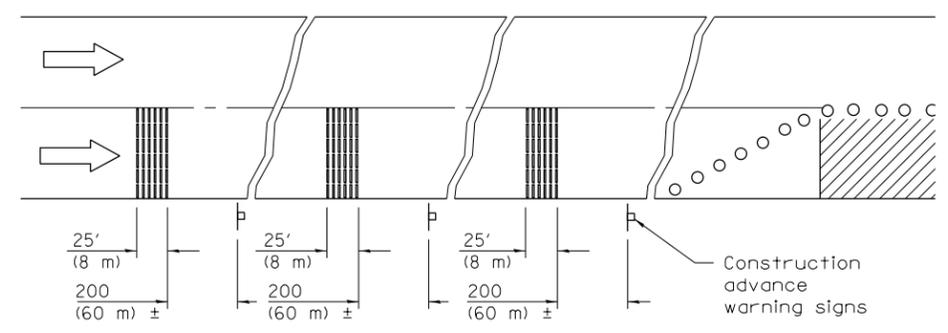
**ARROW BOARDS**



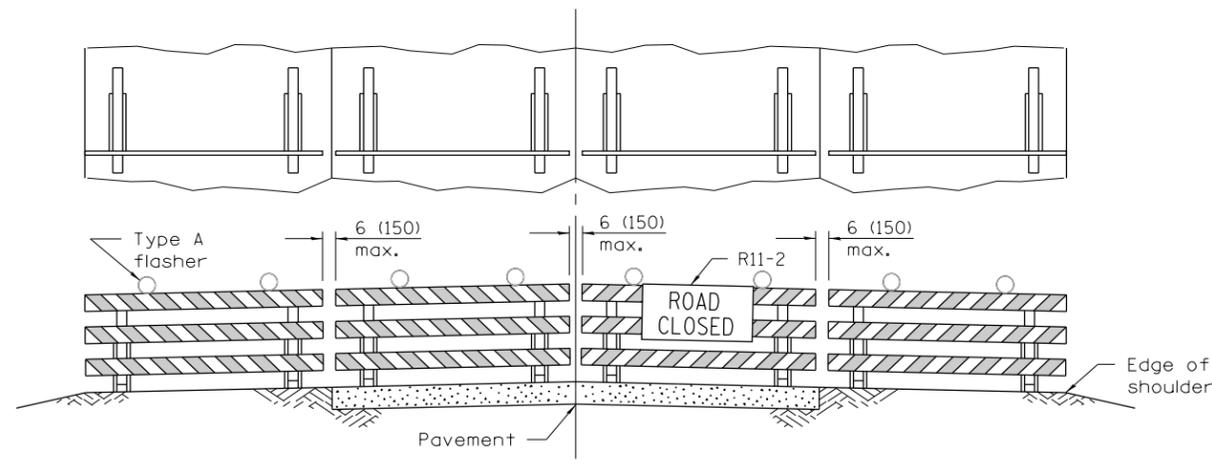
**PLAN**



**SECTION A-A**



**TYPICAL INSTALLATION**

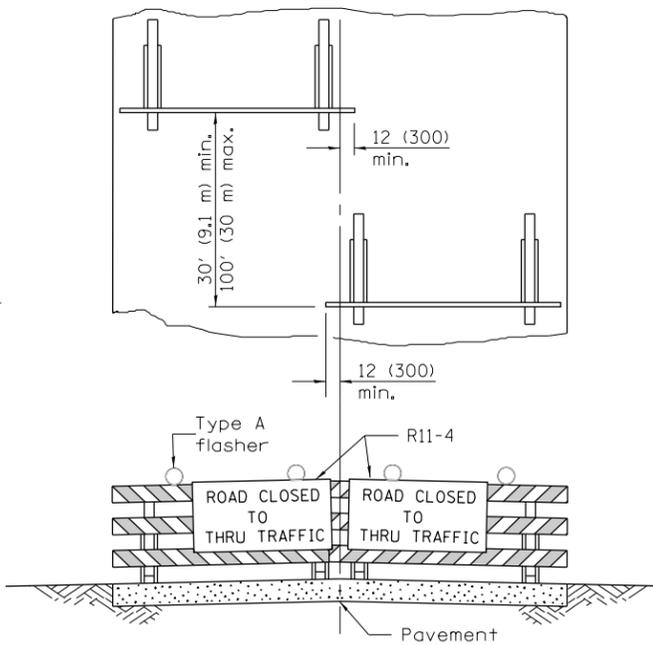


**ROAD CLOSED TO ALL TRAFFIC**

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**

**TEMPORARY RUMBLE STRIPS**



**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 701901-05**

REVISIONS / REMARKS				
NO.	DESCRIPTION	DATE	BY	PLOT DATE
				9/14/2016



**NORTH SHORE BIKE PATH ABUTMENT REPAIRS**  
**IDOT HIGHWAY STANDARDS**

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
--	VAR	16-00999-25-BR	33	33