PROJECT SPECIFICATIONS

Fairview Heights Bike Trail Section

Bridge Deck Replacement
Structure 24.65

ST. CLAIR COUNTY, ILLINOIS

September 2022

ST. CLAIR COUNTY TRANSIT DISTRICT

NOTICE TO BIDDERS

The St. Clair County Transit District, St. Clair County, Illinois, will receive sealed bids for **Fairview Heights Bike Trail Section, Bridge Deck Replacement, Structure 24.65** until **1:30 P.M.**, on **NOVEMBER 7, 2022,** at the office of the St. Clair County Transit District. All bids will be publicly opened and read aloud at **1:35 P.M.,** on **NOVEMBER 7, 2022**. **The sealed bids must be delivered to the St. Clair County Transit District office before 1:30 P.M., during regular business hours.** The Contract Documents, including Plans and Specifications, are on file at the office of the St. Clair County Transit District at 27 North Illinois Street, Belleville, Illinois, 62220.

The proposed project consists of the removal and replacement of the existing pressure treated timber deck planks and guardrail of the bridge carrying the MetroBikeLink over Schoenberger Creek south of Lebanon Road in Fairview Heights, Illinois and any other work necessary to complete the project as described. All work shall be performed in accordance with the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction, edition in effect at the time of the bid.

IDOT Prequalification is required for all bidders.

No less than the prevailing rate of wages, as determined in accordance with the Illinois Prevailing Wage Act, shall be paid to all laborers, operators, teamsters, masons, plumbers, and any workers employed in construction on this project.

Each bidder must deposit with his bid, security in the amount of not less than five percent (5%) of the bidder's total bid price, such security being an acceptable bid bond, certified check, or cashier's check. The successful bidder will be required to furnish a satisfactory Performance Bond in the full amount of the bid.

Contractors must register their email with the St. Clair County Transit District by emailing Jon Schaller at jschaller@gocos.net. Bids will not be accepted or opened which have been received from any bidder who is not a bid document holder of record.

All questions shall be forwarded to Jon Schaller by email at jschaller@gocos.net.

ST. CLAIR COUNTY TRANSIT DISTRICT

PROPOSAL

Fairview Heights Bike Trail Section
Bridge Deck Replacement
Structure 24.65

ST. CLAIR COUNTY TRANSIT DISTRICT

To: The Chairman and Board
St. Clair County Transit District

The undersigned, having familiarized (himself/itself/themselves) with the local conditions affecting the cost of the work and with the Contract Documents, including the Notice to Bidders, General Conditions, Special Provisions, Specifications for Workmanship and Materials, Proposal, Form of Contract, Form of Bonds, etc., and with the plans and addenda on file in the Office of the St. Clair County Transit District, hereby proposes to perform all work required to be performed and to provide and furnish all of the labor, materials, necessary tools, expendable equipment, and all utility and transportation services necessary to perform and complete in a workmanlike manner all work required in connection with the **Fairview Heights Bike Trail Section, Bridge Deck Replacement, Structure 24.65** for the St. Clair County Transit District, all in accordance with the Plans and Specifications, including:

ADDENDA NUMBER	DATE
_____	_____
_____	_____
_____	_____
_____	_____

issued thereto and acknowledged herein, for the unit prices given in the following **SCHEDULE OF QUANTITIES AND BID UNIT PRICES:**

PROPOSAL

Fairview Heights Bike Trail Section
Bridge Deck Replacement
Structure 24.65

SCHEDULE OF QUANTITIES AND BID UNIT PRICES

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	L.S.	1		
2	Deck Removal	L.S.	1		
3	Deck Replacement	L.S.	1		
				Total	

PROPOSAL

If awarded this contract, the undersigned agrees to commence work within ten (10) days after award of the contract or as otherwise directed, and to complete the work as outlined in the Completion Date special provision of the **Fairview Heights Bike Trail Section, Bridge Deck Replacement, Structure 24.65** specifications.

Accompanying this proposal is a (certified check), (cashier's check), (bid bond), in the amount of_____dollars ($_____), payable to the St. Clair County Transit District, which it is agreed will be forfeited to the St. Clair County Transit District if the undersigned fails to execute the contract.

_____
BIDDER - COMPANY NAME

_____
ADDRESS

_____
CITY / STATE / ZIP

BY:

_____

_____
TITLE DATE

PROPOSAL

NON-COLLUSION AFFIDAVIT

The bidder, by its officers and their authorized agents or representatives present at the time of filing this bid, being duly sworn on their oaths, say that neither they nor any of them have in any way, directly or indirectly, entered into any arrangement or agreement with any other bidder, nor with any public officer of the ST. CLAIR COUNTY TRANSIT DISTRICT whereby such affiant or affiants, or either of them, has paid or is to pay to such other bidder or public officer any sum of money; nor has given or is to give such other bidder or public officer anything of value whatever, or such affiant or affiants; or either of them, has not, directly or indirectly, entered into any arrangement or agreement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for by the attached bids; nor any inducement of any form or character, other than that which appears upon the face of the bid, will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the Contract; nor has this bidder entered into any agreement or understanding of any kind whatsoever, with any person, in any way or manner, for any of the proceeds of the contract sought by this bid.

_____ BY: _____
BIDDER - COMPANY NAME

_____ _____
ADDRESS TITLE DATE

_____
CITY / STATE / ZIP

Subscribed and sworn to before me this_____day of_____, 2022.

_____
NOTARY PUBLIC

My commission expires:_____

NOTE: Bidders should not add any conditions or qualifying statements to this bid, as otherwise the bid may be declared irregular as being not responsive to the Advertisement for Bids.

PROPOSAL

BID BOND

WE,_____, as PRINCIPAL, and_____, as SURETY with authority to do business in Illinois, are held and firmly bound unto the ST. CLAIR COUNTY TRANSIT DISTRICT in the penal sum of Five Percent (5%) of the total bid price lawful money of the United States. We bind ourselves jointly and severally, and our joint and several heirs, executors, administrators, successors, and assigns, firmly by these presents, this_____day of_____, 2022, to pay to the ST. CLAIR COUNTY TRANSIT DISTRICT this sum under the conditions of this instrument.

WHEREAS the condition of the foregoing obligation is such that, the said PRINCIPAL is submitting a written proposal to the ST. CLAIR COUNTY TRANSIT DISTRICT for **Fairview Heights Bike Trail Section, Bridge Deck Replacement, Structure 24.65.**

THEREFORE, if the proposal is accepted and a contract awarded to the PRINCIPAL by the ST. CLAIR COUNTY TRANSIT DISTRICT for the aforementioned improvement, and the PRINCIPAL shall within ten (10) days after receipt of the notice of award enter into a formal contract and furnish evidence of the required insurance coverage, all as required by the project specifications, then this obligation shall become void; otherwise, it shall remain in full force and effect.

IN THE EVENT the ST. CLAIR COUNTY TRANSIT DISTRICT determines that the PRINCIPAL has failed to enter into a formal contract in compliance with any requirements set forth in the preceding paragraph, then the ST. CLAIR COUNTY TRANSIT DISTRICT shall immediately be entitled to recover the full penal sum set out above, together with all court costs, all attorney fees and any other expense of recovery.

IN TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers this_____day of _____, 2022.

(SEAL) PRINCIPAL

_____
PRINCIPAL - COMPANY NAME

_____
ADDRESS

_____
CITY / STATE / ZIP

ATTEST:_____ BY: _____

_____ _____
TITLE DATE TITLE DATE

(SEAL) SURETY

_____
SURETY - COMPANY NAME

BY:

_____
ATTORNEY-IN-FACT DATE

Subscribed and sworn to before me this_____day of_____, 2022.

_____
NOTARY PUBLIC

My commission expires:_____

Illinois Department of Transportation

Check Sheet for Recurring Special Provisions

Local Public Agency	County	Section Number
St. Clair County Transit District	St. Clair	Fairview Heights Bike Trail Section Bridge Deck Replacement Structure 24.65

☐ **Check this box for lettings prior to 01/01/2022.**

The Following Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Recurring Special Provisions

Check Sheet #			Reference Page No.
1	☐	Additional State Requirements for Federal-Aid Construction Contracts	1
2	☐	Subletting of Contracts (Federal-Aid Contracts)	4
3	☐	EEO	5
4	☐	Specific EEO Responsibilities Non Federal-Aid Contracts	15
5	☐	Required Provisions - State Contracts	20
6	☐	Asbestos Bearing Pad Removal	26
7	☐	Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal	27
8	☐	Temporary Stream Crossings and In-Stream Work Pads	28
9	☐	Construction Layout Stakes	29
10	☐	Use of Geotextile Fabric for Railroad Crossing	32
11	☐	Subsealing of Concrete Pavements	34
12	☐	Hot-Mix Asphalt Surface Correction	38
13	☐	Pavement and Shoulder Resurfacing	40
14	☐	Patching with Hot-Mix Asphalt Overlay Removal	41
15	☐	Polymer Concrete	43
16	☐	PVC Pipeliner	45
17	☐	Bicycle Racks	46
18	☐	Temporary Portable Bridge Traffic Signals	48
19	☐	Nighttime Inspection of Roadway Lighting	50
20	☐	English Substitution of Metric Bolts	51
21	☐	Calcium Chloride Accelerator for Portland Cement Concrete	52
22	☐	Quality Control of Concrete Mixtures at the Plant	53
23	☐	Quality Control/Quality Assurance of Concrete Mixtures	61
24	☐	Digital Terrain Modeling for Earthwork Calculations	77
25	☐	Preventive Maintenance - Bituminous Surface Treatment (A-1)	79
26	☐	Temporary Raised Pavement Markers	85
27	☐	Restoring Bridge Approach Pavements Using High-Density Foam	86
28	☐	Portland Cement Concrete Inlay or Overlay	89
29	☐	Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	93
30	☐	Longitudinal Joint and Crack Patching	96
31	☐	Concrete Mix Design - Department Provided	98
32	☐	Station Numbers in Pavements or Overlays	99

Local Public Agency	County	Section Number
St. Clair County Transit District	St. Clair	Fairview Heights Bike Trail Section Bridge Deck Replacement Structure 24.65

The Following Local Roads And Streets Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Local Roads And Streets Recurring Special Provisions

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LRS 3	☒	Work Zone Traffic Control Surveillance	103
LRS 4	☐	Flaggers in Work Zones	104
LRS 5	☒	Contract Claims	105
LRS 6	☒	Bidding Requirements and Conditions for Contract Proposals	106
LRS 7	☐	Bidding Requirements and Conditions for Material Proposals	112
LRS 8		**Reserved**	118
LRS 9	☐	Bituminous Surface Treatments	119
LRS 10		**Reserved**	123
LRS 11	☒	Employment Practices	124
LRS 12	☒	Wages of Employees on Public Works	126
LRS 13	☒	Selection of Labor	128
LRS 14	☐	Paving Brick and Concrete Paver Pavements and Sidewalks	129
LRS 15	☒	Partial Payments	132
LRS 16	☐	Protests on Local Lettings	133
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LRS 19	☐	Reflective Crack Control Treatment	136

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SPECIAL PROVISIONS

Fairview Heights Bike Trail Section
Bridge Deck Replacement
Structure 24.65

The following Special Provisions supplement the "Standard Specifications for Road and Bridge Construction", latest edition in effect on the date of the invitation for bids, as adopted by the Illinois Department of Transportation (IDOT) and the Supplemental Specifications and Recurring Special Provisions adopted therewith, and the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways" latest edition in effect on the date of the invitation for bids, shall apply to and govern the construction of the above designated project. In case of conflict with any part, or parts, of said specifications, these special provisions shall take precedence over the Standard Specifications and inserted special provisions.

All references to Department and Engineer in the “Standard Specifications for Road and Bridge Construction" shall be defined as the St. Clair County Transit District or their authorized representative.

PROJECT LOCATION: The project is located at the structure carrying MetroBikeLink over Schoenberger Creek (Str. 24.65), 0.14 Mi. south of Lebanon Road in Fairview Heights, Illinois and adjacent to the MetroLink Rail.

DESCRIPTION OF WORK: The proposed project consists of the complete removal and replacement of the existing pressure treated timber deck planks, guardrail, and nailers, including all carriage bolts, self-drilling screws, neoprene rubber barrier, and any other work necessary to complete the project as described.

GENERAL: The Contractor shall furnish all labor, materials, and equipment to complete the work as described in accordance with these special provisions and the applicable sections of the IDOT Standard Specifications for Road and Bridge Construction.

EXAMINATION OF SITE: The Contractor shall be responsible for completing any necessary site inspections prior to submitting a bid on this project. Upon receipt of a bid, it shall be assumed that the Contractor is fully familiar with the project site and the work to be completed.

PREQUALIFICATION: The Contractor shall be prequalified through IDOT.

CONTRACT ADMINISTRATOR: The St. Clair County Transit District or its authorized representative will be the assigned Contract Administrator of this contract. This individual will be the point of contact for the Contractor regarding any issues or concerns relating to the contract. The Contract Administrator will also be responsible for scheduling site visits with the Contractor, reviewing sites for completion, enforcement of contract provisions

and the receipt of invoices asprovided by the Contractor. The Contractor will be provided contact information for the ContractAdministrator upon award of the contract and will be subsequently notified should the administrator change during the life of the contract.

PROJECT COORDINATION: A mandatory pre-construction meeting shall be scheduled within one week of contract ratification between the Contractor and the St. Clair County Transit District. All work will be scheduled through the St. Clair County Transit District Director of Facilities. Contractor must present a preliminary work schedule at the pre-construction meeting. The St. Clair County Transit District will have progress meetings, if necessary, which shall be held at the St. Clair County Transit District Office.

PERMITTING: The Contractor shall be required to obtain any necessary permits to complete the project prior to beginning work.

CONSTRUCTION ACCESS: The St. Clair County Transit District will provide the Contractor with access to the project site via the gate and driveway from Lebanon Road, west of the MetroLink alignment, to complete construction activities.

COMPLETION DATE: The Contractor shall complete all work within Sixty (60) calendar days from the issuance of the notice to proceed. An extension will be issued only when documentation is provided due to material delays and weather issues. No work shall be completed until a respective notice to proceed is provided by the St. Clair County Transit District.

DECK REMOVAL: This work shall consist of removal and disposal of the existing pressure treated timber deck planks, guardrail, and nailers, including all carriage bolts, washers, and nuts, self-drilling screws, and neoprene rubber barrier and washers in accordance with the applicable portions of Section 501 of the Standard Specifications.

Sound timber deck planks, guardrail, and nailers removed from the structure shall be retained by the Contractor and salvaged for use by the St. Clair County Transit District. The Contractor shall stockpile the retained material in a suitable location at the project site and protect from damage. St. Clair County Transit District will inspect the retained material to determine its suitability for salvage and remove the suitable material from the project site. Material deemed to be unsuitable for salvage by the St. Clair County Transit District will be disposed of by the Contractor.

This work will be paid for at the LUMP SUM price for DECK REMOVAL which price shall include the cost for all labor, equipment, and materials to complete the work.

DECK REPLACEMENT: This work shall consist of replacement of the pressure treated timber deck planks, guardrail, and nailers, including all carriage bolts, washers, and nuts, self-drilling screws, and neoprene rubber barrier and washers. This work will be done in accordance with the applicable portions of Section 507 of the Standard Specifications and as detailed on Sheets No. 3 & 4 of the As Built Construction Plans except for the Notes which are deleted in their entirety and replaced with the following:

NOTES:

1. Carriage bolts and screws shall be Stainless Steel.
2. Deleted.
3. Nailers shall be installed in lengths such that each piece is fastened with a minimum of 2 carriage bolts.
4. The maximum moisture content of the pressure treated timber shall be 20% at the time of installation.
5. Pressure treatment shall be Micronized Copper Azole with a minimum retention of 0.23 pcf.
6. Submit pressure treatment specifications prior to ordering timber. Pressure treatment specifications shall include type of treatment and retention level.
7. Pressure treated timber shall not contact any metal except stainless steel fasteners and galvanized washers.
8. The neoprene rubber barrier shall meet the material requirements of section 1052.02 (a) of the Standard Specifications.
9. Screws shall be driven such that boards are tightly clamped. Where screw threads in the top board push the boards apart, screws shall be backed out and re-driven until the boards are tightly clamped. If re-driving does not tightly clamp boards, other methods such as pre-drilling top boards shall be used.
10. The minimum width of any deck plank shall be 3". Planks shall be ripped on a table saw or by a circular saw with a guide to produce a straight and clean edge. Free-hand ripping with a circular saw will not be permitted.
11. Adjacent deck boards shall have a maximum elevation difference of 1/4".
12. Rail boards shall only terminate at Posts as shown in Section A-A and at the Section Thru Rail at Pier. Rail boards at each abutment shall be continuous over the last post and terminate as shown in the Railing Elevation at Abutments.
13. All boards shall be pressure treated No. 1 Southern Pine.
14. Deck vertical offsets can occur within a plank or between adjacent planks due to shake, cupping, vertical bowing, twisting or a combination of these (See offset defect examples). Planks with vertical offsets exceeding 1/2" shall be removed and replaced at the Contractor's expense. Vertical offsets due to cup, vertical bowing, twisting or a combination of these that are 12" or less from the face of the rail will not have to be remediated.
15. The warranty period for the timber deck, guardrail, and nailers shall be 2 years.

This work will be paid for at the LUMP SUM price for DECK REPLACEMENT which price shall include the cost for all labor, equipment, and materials to complete the work.

INVOICES: The St. Clair County Transit District will pay all Contractor submitted invoices on a monthly basis. The St. Clair County Transit District will have 72 hours to inspect the

project site before any submitted invoice is processed for payment. Under no circumstances will the Contract Administrator be authorized to pre-pay for work prior to completion or for the partial completion of work. Invoice templates shall follow the standard AIA form. The Contract Administrator can provide a template upon request. If the Contractor elects to use their own invoice, then said invoice shall includethe following features: invoice number, invoice date, individual listing of project site with corresponding cost and account reference along with the date the work was completed. Invoices shall be emailed to the St. Clair County Transit District Office via email provided to the Contractor. All invoices submitted shall be paid **Net 30**.

RETAINAGE: To further assure timely completion of the work, restoration, and clean-up of the project site, 10% of the payment due to the Contractor shall be retained until the project is successfully completed and all punch list items are adequately addressed.

PROJECT LABOR AGREEMENT (PLA) AND PREVAILING WAGES: A PLA shall be required for this project and no less than the prevailing rate of wages, as determined in accordance with the Illinois Prevailing Wage Act, shall be paid to all laborers, operators, teamsters,masons, plumbers, and any workmen employed in the accomplishment of this project. On site wage interviews may be conducted periodically to assure compliance with the prevailing wage rates. **At the time of each payment request, the Contractor <u>must</u> submit copies of weekly payrolls as proof of compliance with prevailing wage rates. Payment <u>will not</u> be made without submittal of this documentation and full compliance with the prevailing wage rates.** For additionalinformation, please visit the Illinois Department of Labor's Web Site at https://www2.illinois.gov/idol.

TRAFFIC CONTROL PLAN: Traffic control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the National Manual on Uniform Traffic Control Devices for Streets and Highways, Illinois Supplement to the National Manual on Uniform Traffic Control Devices, these Special Provisions, and any special details and Highway Standards contained herein.

The Contractor shall install appropriate signage providing for the closure of the bike trail. Closure signs shall be placed along the bike trail at its intersection with Lebanon Road and Dutch Hollow Road in accordance with Standard BLR 21. A supplemental plaque indicating the distance to the closure shall be installed on the first sign at Dutch Hollow Road. Distance to closure is 1.75 miles.

Cost for this work shall be considered included in the costs of the various items of work being completed as part of the project and no additional compensation will be allowed.

CONSTRUCTION LAYOUT: The Contractor shall furnish and provide all construction layout necessary to complete the work as outlined herein. The Contractor shall provide field forces, equipment, and material to perform the entire layout for the work, set additional stakes, reference points, and any other horizontal or vertical controls, including supplementary bench marks, necessary to secure a correct layout of the work.

The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Transit District or their agent and the acceptance of all or any part of it shall not reliever the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.

Cost for this work shall be considered included in the costs of the various items of work being completed as part of the project and no additional compensation will be allowed.

EQUIPMENT AND MATERIAL STORAGE: The Contractor shall use staging locations adjacent to the project site as to not create an unsafe work area. Staging locations to be used by the Contractor will require written approval of the St. Clair County Transit District.

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES: It is the Contractor's responsibility to determine the existence and location of all underground facilities, structures, and utilities and to protect them from damage during construction.

PROTECTION OF EXISTING FACILITIES: The Contractor shall maintain and protect all existing facilities, both on-site and off-site, including but not limited to utilities, roadways, trees, tree limbs, landscaping, lawns, and buildings which are not scheduled for removal or replacement under this project. The Contractor shall provide any required sheeting, shoring, covering or other means and methods to protect existing facilities. The Contractor shall bear all costs and make all arrangements to repair or replace, any existing facility, both on-site and off-site, damaged as a result of construction, which is not scheduled for removal or replacement as part of this project.

INDEMNIFICATION: To the fullest extent permitted by laws and regulations, the Contractor shall indemnify and hold harmless the St. Clair County Transit District, their agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of the St. Clair County Transit District's architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by laws and regulations regardless of the negligence of any such party. In any and all claims against the St. Clair County Transit District or any of their consultants, agents, or employees by any employee of the Contractor, any subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph A shall not be limited in any way by any limitation on the amount or type of

damages, compensation or benefits payable by or for the Contractor or any such subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. The obligations of the Contractor shall not extend to the liability of the St. Clair County Transit District or their consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications.

SAFETY AND PROTECTION: The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the project. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

- All employees on the project and other persons and organizations who may be affected thereby; and
- All work, materials, and equipment to be incorporated therein, whether in storage on or off the site; and
- Other property at the site adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons and property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and of underground facilities and utility owners when prosecution of the work may affect them and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor, supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts either of them may be liable, shall be remedied by the Contractor (except damage or loss attributable to the fault of drawings or specifications or to the acts or omissions of the St. Clair County Transit District or anyoneemployed therein or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor). The Contractor's duties and responsibilities for the safety and protection ofthe work shall continue until such time as all the Work is completed and the St. Clair County Transit District has issued a notice to the Contractor that the work is acceptable(except as otherwise expressly provided in connection with Substantial Completion).

The Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent, unless otherwise designated in writing by the Contractor to the St. Clair County Transit District.

In emergencies affecting the safety or protection of persons or the work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from

the St. Clair County Transit District, is obligated to act to prevent threatened damage, injury, or loss. The Contractor shall give the St. Clair County Transit District prompt, written notice if the Contractor believes that any significant changes in the work or variations from the contract documents have been caused thereby. If the St. Clair County Transit District determines that a change in the contract documents is required because of the action taken in response to an emergency, a work directive change or change order will be issued to document the consequences of the changes or variations.

CONFLICTS WITH PERSONNEL: Should a conflict between personnel of the Contractor and the St. Clair County Transit District escalate to the point that it hinders progress of the work and cannot be settled amicably, the Contractor personnel involved in the conflict shall be removed from the project. A personnel conflict shall not give cause for the Contractor to terminate this contract nor to pull employees from the active work site.

WARRANTY: The Contractor shall warranty the timber deck, guardrail, and nailers for a period of 2 years from the date of final acceptance by the St. Clair County Transit District.

COMPENSABLE DELAY COSTS (BDE)

Effective: June 2, 2017
Revised: April 1, 2019

Revise Article 107.40(b) of the Standard Specifications to read:

"(b) Compensation. Compensation will not be allowed for delays, inconveniences, or damages sustained by the Contractor from conflicts with facilities not meeting the above definition; or if a conflict with a utility in an unanticipated location does not cause a shutdown of the work or a documentable reduction in the rate of progress exceeding the limits set herein. The provisions of Article 104.03 notwithstanding, compensation for delays caused by a utility in an unanticipated location will be paid according to the provisions of this Article governing minor and major delays or reduced rate of production which are defined as follows.

(1) Minor Delay. A minor delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two hours, but not to exceed two weeks.

(2) Major Delay. A major delay occurs when the work in conflict with the utility in an unanticipated location is completely stopped for more than two weeks.

(3) Reduced Rate of Production Delay. A reduced rate of production delay occurs when the rate of production on the work in conflict with the utility in an unanticipated location decreases by more than 25 percent and lasts longer than seven calendar days."

Revise Article 107.40(c) of the Standard Specifications to read:

"(c) Payment. Payment for Minor, Major, and Reduced Rate of Production Delays will be made as follows.

(1) Minor Delay. Labor idled which cannot be used on other work will be paid for according to Article 109.04(b)(1) and (2) for the time between start of the delay and the minimum remaining hours in the work shift required by the prevailing practice in the area.

Equipment idled which cannot be used on other work, and which is authorized to standby on the project site by the Engineer, will be paid for according to Article 109.04(b)(4).

(2) Major Delay. Labor will be the same as for a minor delay.

Equipment will be the same as for a minor delay, except Contractor-owned equipment will be limited to two weeks plus the cost of move-out to either the

Contractor's yard or another job and the cost to re-mobilize, whichever is less. Rental equipment may be paid for longer than two weeks provided the Contractor presents adequate support to the Department (including lease agreement) to show retaining equipment on the job is the most economical course to follow and in the public interest.

(3) Reduced Rate of Production Delay. The Contractor will be compensated for the reduced productivity for labor and equipment time in excess of the 25 percent threshold for that portion of the delay in excess of seven calendar days. Determination of compensation will be in accordance with Article 104.02, except labor and material additives will not be permitted.

Payment for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be determined according to Article 109.13."

Revise Article 108.04(b) of the Standard Specifications to read:

"(b) No working day will be charged under the following conditions.

(1) When adverse weather prevents work on the controlling item.

(2) When job conditions due to recent weather prevent work on the controlling item.

(3) When conduct or lack of conduct by the Department or its consultants, representatives, officers, agents, or employees; delay by the Department in making the site available; or delay in furnishing any items required to be furnished to the Contractor by the Department prevents work on the controlling item.

(4) When delays caused by utility or railroad adjustments prevent work on the controlling item.

(5) When strikes, lock-outs, extraordinary delays in transportation, or inability to procure critical materials prevent work on the controlling item, as long as these delays are not due to any fault of the Contractor.

(6) When any condition over which the Contractor has no control prevents work on the controlling item."

Revise Article 109.09(f) of the Standard Specifications to read:

"(f) Basis of Payment. After resolution of a claim in favor of the Contractor, any adjustment in time required for the work will be made according to Section 108. Any adjustment in the costs to be paid will be made for direct labor, direct materials, direct equipment, direct jobsite overhead, direct offsite overhead, and other direct costs allowed by the resolution. Adjustments in costs will not be made for interest charges, loss of anticipated profit, undocumented loss of efficiency, home office overhead and unabsorbed overhead

other than as allowed by Article 109.13, lost opportunity, preparation of claim expenses and other consequential indirect costs regardless of method of calculation.

The above Basis of Payment is an essential element of the contract and the claim cost recovery of the Contractor shall be so limited."

Add the following to Section 109 of the Standard Specifications.

"**109.13 Payment for Contract Delay.** Compensation for escalated material costs, escalated labor costs, extended project overhead, and extended traffic control will be allowed when such costs result from a delay meeting the criteria in the following table.

Contract Type	Cause of Delay	Length of Delay
Working Days	Article 108.04(b)(3) or Article 108.04(b)(4)	No working days have been charged for two consecutive weeks.
Completion Date	Article 108.08(b)(1) or Article 108.08(b)(7)	The Contractor has been granted a minimum two week extension of contract time, according to Article 108.08.

Payment for each of the various costs will be according to the following.

(a) Escalated Material and/or Labor Costs. When the delay causes work, which would have otherwise been completed, to be done after material and/or labor costs have increased, such increases will be paid. Payment for escalated material costs will be limited to the increased costs substantiated by documentation furnished by the Contractor. Payment for escalated labor costs will be limited to those items in Article 109.04(b)(1) and (2), except the 35 percent and 10 percent additives will not be permitted.

(b) Extended Project Overhead. For the duration of the delay, payment for extended project overhead will be paid as follows.

(1) Direct Jobsite and Offsite Overhead. Payment for documented direct jobsite overhead and documented direct offsite overhead, including onsite supervisory and administrative personnel, will be allowed according to the following table.

Original Contract Amount	Supervisory and Administrative Personnel
Up to $5,000,000	One Project Superintendent
Over $ 5,000,000 - up to $25,000,000	One Project Manager, One Project Superintendent or Engineer, and One Clerk
Over $25,000,000 - up to $50,000,000	One Project Manager, One Project Superintendent, One Engineer, and

	One Clerk
Over $50,000,000	One Project Manager, Two Project Superintendents, One Engineer, and One Clerk

(2) Home Office and Unabsorbed Overhead. Payment for home office and unabsorbed overhead will be calculated as 8 percent of the total delay cost.

(c) Extended Traffic Control. Traffic control required for an extended period of time due to the delay will be paid for according to Article 109.04.

When an extended traffic control adjustment is paid under this provision, an adjusted unit price as provided for in Article 701.20(a) for increase or decrease in the value of work by more than ten percent will not be paid.

Upon payment for a contract delay under this provision, the Contractor shall assign subrogation rights to the Department for the Department's efforts of recovery from any other party for monies paid by the Department as a result of any claim under this provision. The Contractor shall fully cooperate with the Department in its efforts to recover from another party any money paid to the Contractor for delay damages under this provision."

80384

SUBCONTRACTOR MOBILIZATION PAYMENTS (BDE)

Effective: November 2, 2017
Revised: April 1, 2019

Replace the second paragraph of Article 109.12 of the Standard Specifications with the following:

"This mobilization payment shall be made at least seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form BC 260A submitted for the approval of the subcontractor's work.

Value of Subcontract Reported on Form BC 260A	Mobilization Percentage
Less than $10,000	25%
$10,000 to less than $20,000	20%
$20,000 to less than $40,000	18%
$40,000 to less than $60,000	16%
$60,000 to less than $80,000	14%
$80,000 to less than $100,000	12%
$100,000 to less than $250,000	10%
$250,000 to less than $500,000	9%
$500,000 to $750,000	8%
Over $750,000	7%"

80391

VEHICLE AND EQUIPMENT WARNING LIGHTS (BDE)

Effective: November 1, 2021
Revised: November 1, 2022

Add the following paragraph after the first paragraph of Article 701.08 of the Standard Specifications:

"The Contractor shall equip all vehicles and equipment with high-intensity oscillating, rotating, or flashing, amber or amber-and-white, warning lights which are visible from all directions. In accordance with 625 ILCS 5/12-215, the lights may only be in operation while the vehicle or equipment is engaged in construction operations."

80439

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION FOR INSURANCE

Effective: February 1, 2007
Revised: August 1, 2007

All references to Sections or Articles in this specification shall be construed to mean specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

The Contractor shall name the following entities as additional insured under the Contractor's general liability insurance policy in accordance with Article 107.27:

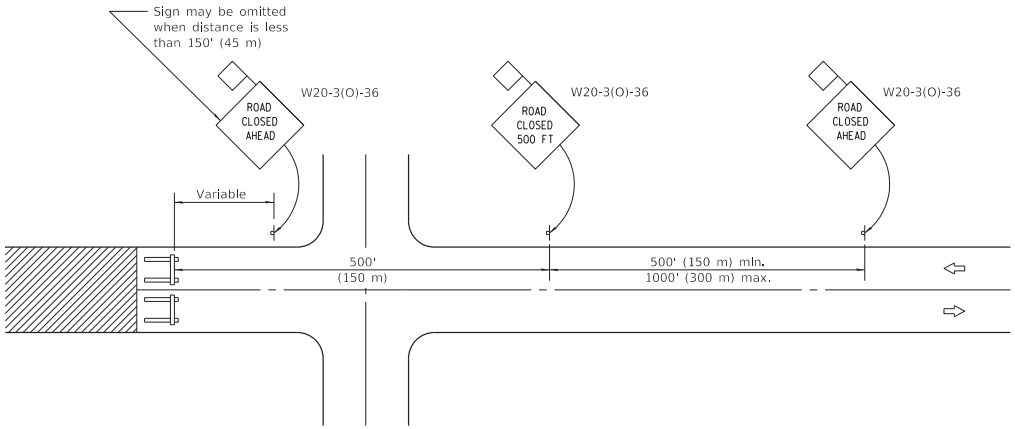
St. Clair County Transit District, its elected and appointed officials, officers, agents and employees,

both individually and collectively

Bi-State Development Agency, its officers, commissioners, agents and employees

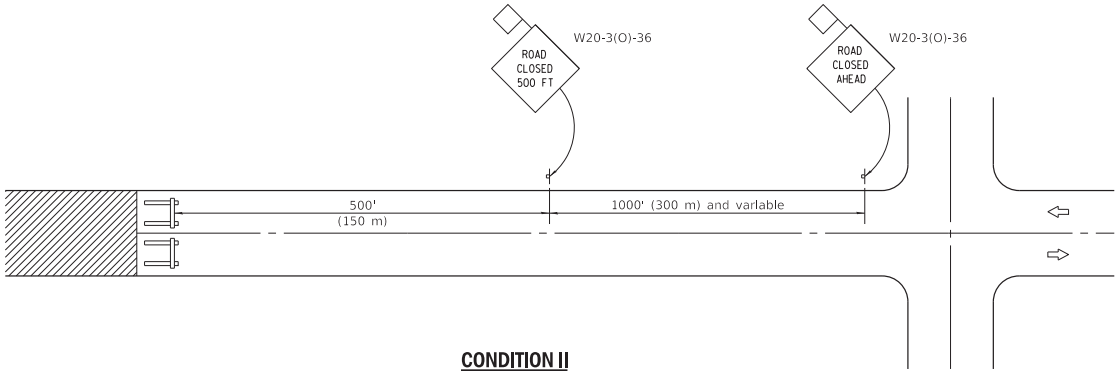
Gonzalez Companies, LLC, its officers, agents, and employees

The entities listed above and their officers, employees, and agents shall be indemnified and held harmless in accordance with Article 107.26.



CONDITION I

When distance from closure to crossroad is less than 1500' (450 m)



CONDITION II

When distance from closure to crossroad is greater than 1500' (450 m)

SYMBOLS

Work area

Type III Barricade

Sign with 18x18 (450x450) min. orange flag attached

GENERAL NOTES

Type III Barricades and R11-2-4830 signs shall be positioned as shown in "Road Closed To All Traffic" detail on Highway Standard 701901.

Two Type A Low Intensity Flashing Lights shall be used on each approach in advance of the work area during hours of darkness. One light shall be installed above the barricades and the other above the first advance warning sign.

All warning signs shall have minimum dimensions of 36 x 36 (900 x 900) and have a black legend on an orange reflectorized background.

When fluorescent signs are used, orange flags are not required.

Longitudinal dimensions may be adjusted to fit field conditions.

When the distance between the barricade and the intersection is between 1500' (450 m) and 2000' (600 m), the advance sign shall be placed at the intersection. When the distance between the barricade and the intersection is over 2000' (600 m), an additional sign shall be placed at the intersection. The additional sign shall give the distance to the barricade in miles or fractions of a mile.

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

Illinois Department of Transportation

PASSED January 1, 2012

ENGINEER OF LOCAL ROADS AND STREETS

APPROVED January 1, 2012

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07

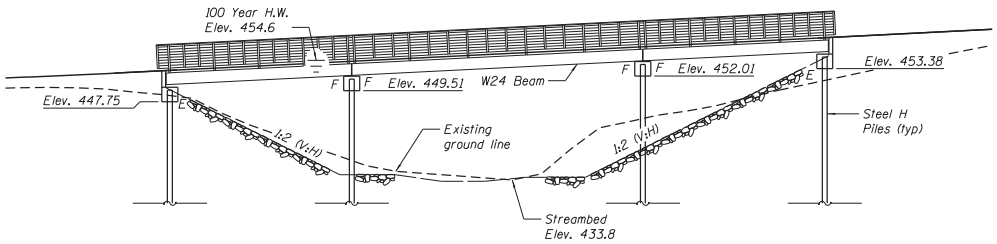
DATE	REVISIONS
1-1-12	Omitted two notes from
	GENERAL NOTES.
1-1-09	Switched units to
	English (metric).

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

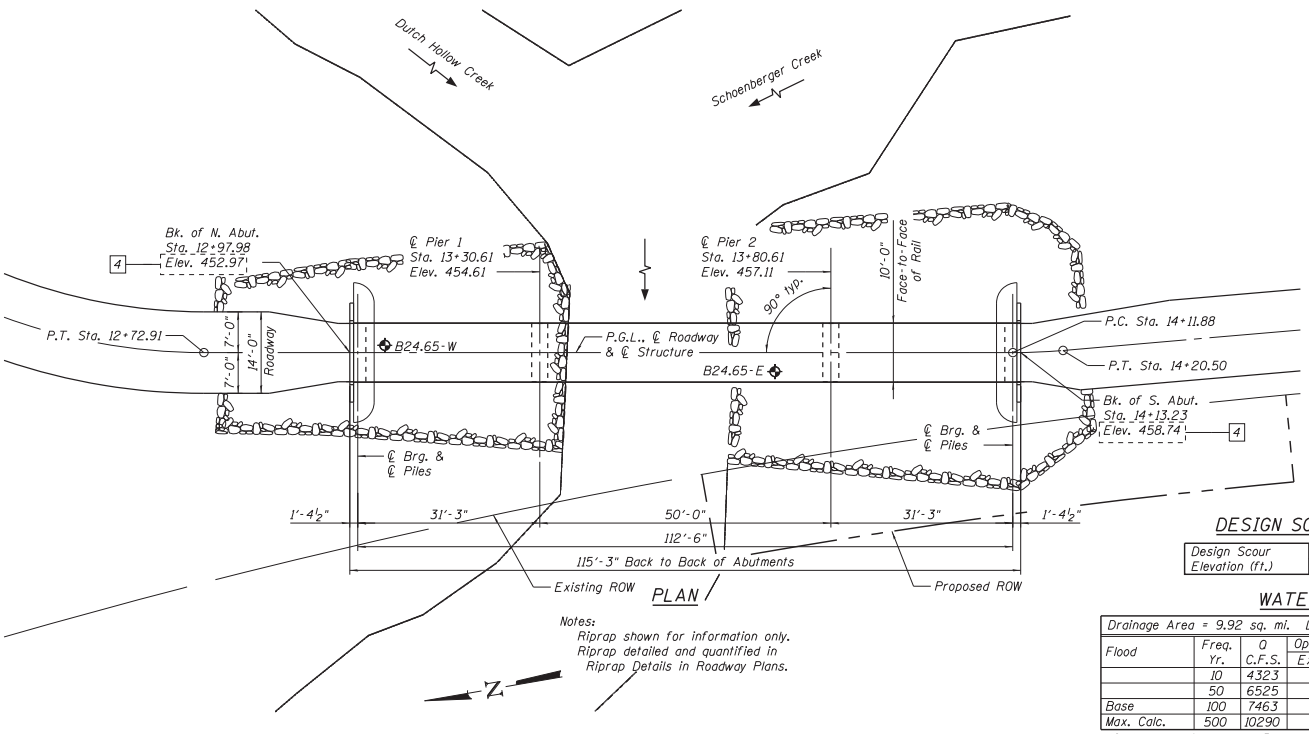
STANDARD B.L.R. 21-9

Benchmark: Permanent benchmarks to be set by Engineer prior to construction.

Existing Structure: None.

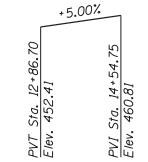


ELEVATION
(Looking east)



PLAN

Notes:
Riprap shown for information only.
Riprap detailed and quantified in
Riprap Details in Roadway Plans.



PROFILE GRADE
(along ℄ Roadway)

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications
2009 LRFD Guide Specifications for the Design of Pedestrian Bridges

DESIGN STRESSES
FIELD UNITS

Concrete	f'c = 3,500 psi
Reinforcement	fy = 60,000 psi
Structural Steel	
M 270 Gr. 50W	fy = 50,000 psi
Timber Deck & Railing - No. 1 Southern Pine	
fb = 1,250 psi	
E = 1,700,000 psi	

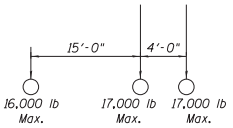
PRECAST UNITS

Concrete	f'c = 5,000 psi
Non-shrink Grout	f'c = 7,000 psi

SEISMIC DATA
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.26g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.56g
Soil Site Class = D

LOADING
Pedestrian Live Load according to Art. 3.1 of the Guide Specifications
All Members = 90#/sq. ft.

Design Tandem:
50,000 lb gross vehicle with the following axle load configuration:



INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
3.-4. Superstructure Details
5. Framing Plan
6. Bearing Details
7. Approach Slab Details
8. Abutment Details (Cast in Place Option)
9. Abutment Details (Precast Option)
10. Pier Details (Cast in Place Option)
11. Pier Details (Precast Option)
12. Pile Details
13.-14. Soil Boring Logs

KERMIT P. CHRISTMANN
081-005202
LICENSED
STRUCTURAL
ENGINEER
OF
ILLINOIS

EXPIRES 11/30/2012

DESIGN SCOUR ELEVATION TABLE

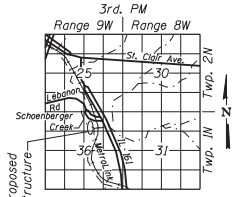
Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	S. Abut.
	447.46	429.28	433.97	453.22

WATERWAY INFORMATION

Drainage Area = 9.92 sq. mi. Low Grade Elev. 450.53 @ Sta. 12+11.58

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	4323		1157	450.7		0.06		450.8
	50	6525		1363	453.7		0.13		453.8
Base	100	7463		1394	454.6		0.14		454.7
Max. Calc.	500	10290		1417	456.1		0.13		456.2

10-Year Velocity through Proposed Structure = 4.45 fps



LOCATION SKETCH

GENERAL PLAN & ELEVATION
SCHOENBERGER CREEK
STA. 12+97.98 TO STA. 14+13.23
STRUCTURE B24.65

DESIGNED	JTH
CHECKED	DJH
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

4 DJH 12/02/2013

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St Clair County Transit District

Metro
Bi-State Development Agency

SHEET NO. 1
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR		
	MetroLink - Slopes Stabilization II	CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Plotted by: dhaldemer 12/2/2013 9:42:20 AM
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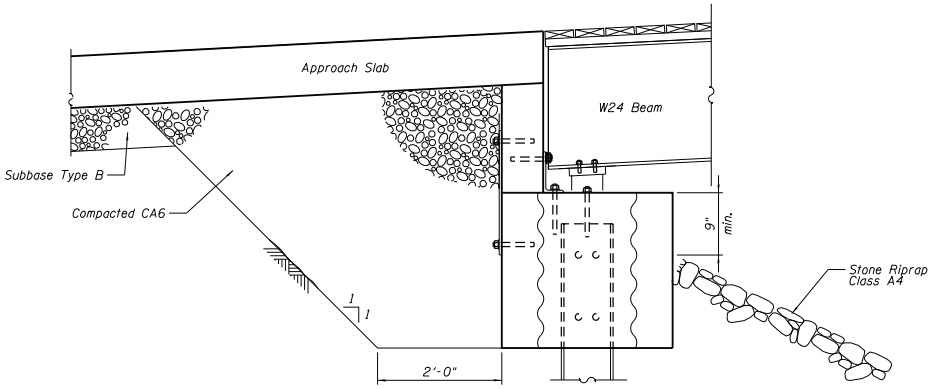


SECTION THRU ABUTMENT

(Showing Precast Alternate)

NOTE:
Place CA6 in 6" max lifts and compact to 95% standard proctor with lightweight walk behind compaction equipment.

GENERAL NOTES

Fasteners shall be ASTM A325 Type 3. Bolts shall be $\frac{3}{4}$" in $\frac{13}{16}$" holes, unless otherwise noted.

Calculated Weight of Structural Steel: AASHTO M270 Grade 50W = 38,130 lbs

Hot rolled structural steel W shapes, C shapes, angles, plates and bars shall be AASHTO M270 Grade 50W except:

- HP sections shall be AASHTO M270 Grade 50

No Field welding is permitted except as specified in the contract documents.

Abutment bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

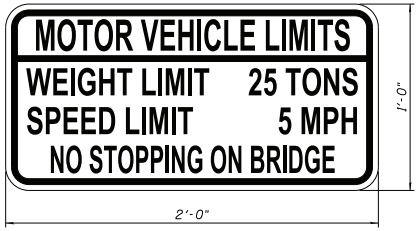
The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number as shown in the contract plans.

The precast substructure units do not need to be cast under a plant controlled setting. Construction observation is required regardless of the construction method employed.

The Contractor shall limit construction traffic over the bridge. Creek crossings shall be utilized to allow construction traffic around the bridges. Equipment using the bridge must be approved by Metro.

Anchor bolts and expansion anchors shall be hot dipped galvanized in accordance with AASHTO M232.

Galvanized hot rolled shapes, bars and plates shall be galvanized in accordance with AASHTO M111.



SIGN PANEL DETAIL

(See Sign Panel Schedule in Roadway Plans)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.	-	22	22
Concrete Structures	Cu. Yd.	9.3	12.6	21.9
Treated Timber	F.B.M.	7,120	-	7,120
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Reinforcement Bars	Pound	1,710	1,070	2,780
Reinforcement Bars, Epoxy Coated	Pound	-	200	200
Furnishing Steel Piles HP 10x57	Ft.	-	208	208
Driving Piles	Ft.	-	208	208
Test Pile Steel HP 10x57	Each	-	4	4
Pile Shoes	Each	-	8	8
Elastomeric Bearing Assembly, Type I	Each	-	8	8
Fixed Bearing Assembly	Each	-	8	8
Anchor Bolts, $\frac{5}{8}$"	Each	-	16	16
Anchor Bolts, $\frac{3}{4}$"	Each	-	4	4

GENERAL DATA
STRUCTURE B24.65

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DESIGNED	JTH
CHECKED	DJH/KPC
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

Plotted by: theger

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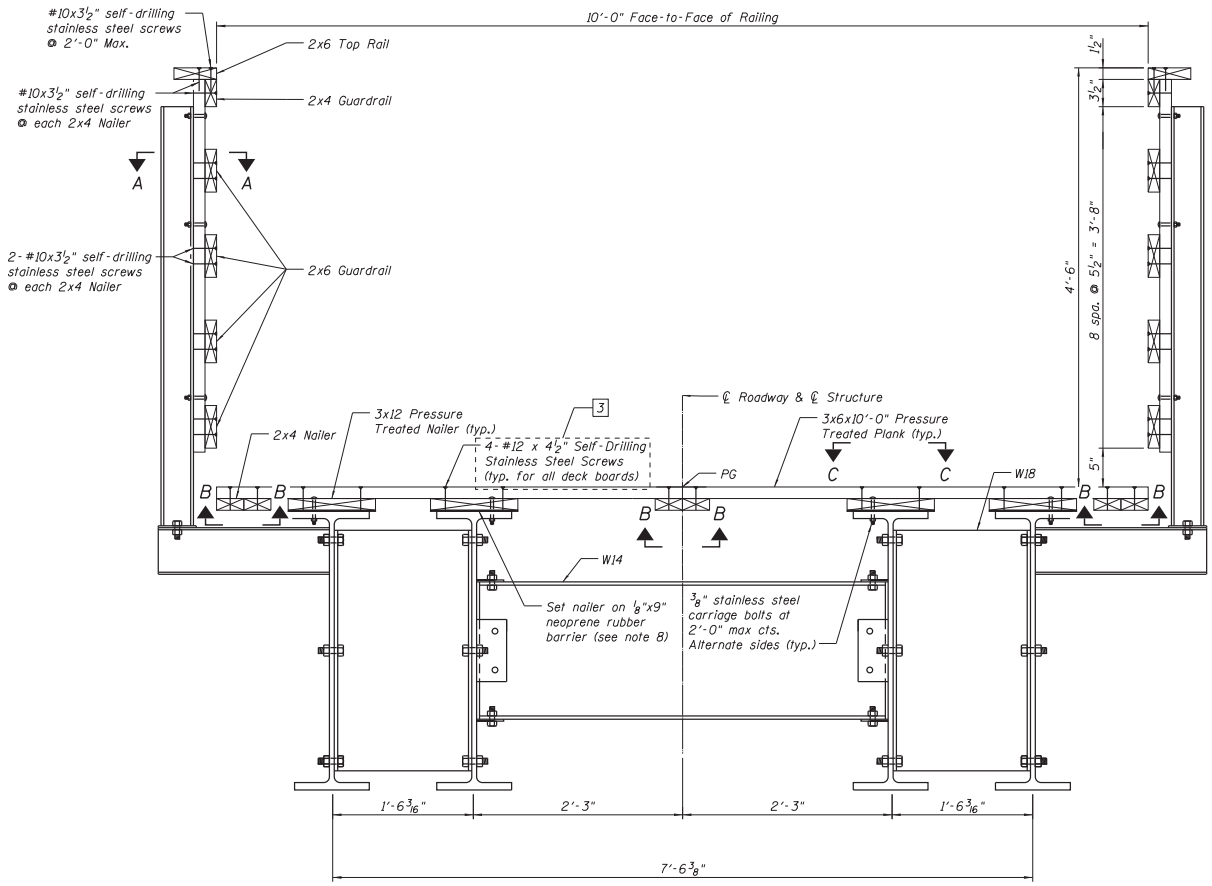
St Clair County Transit District

Metro — Bi-State Development Agency

SHEET NO. 2
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	108
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

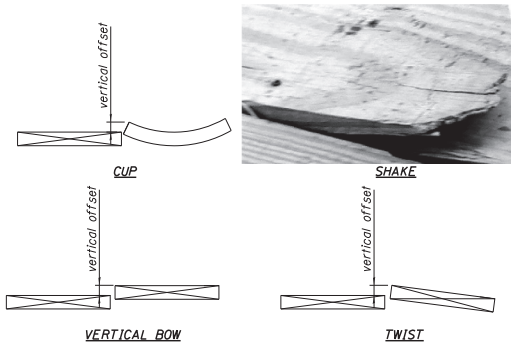


SETION THRU DECK AT MIDSPAN

(See Sheet 4 for sections A-A, B-B and C-C.)

NOTES:

1. Carriage bolts and screws shall be Stainless Steel. Cost for carriage bolts and screws shall be included in Treated Timber.
2. Treated Timber construction shall be in accordance with Section 507 of the Standard Specification except as modified by these plans.
3. Nailers shall be installed in lengths such that each piece is fastened with a minimum of 2 carraige bolts.
4. The maximum moisture content of Treated Timber shall be 20% at the time of installation.
5. Pressure treatment shall be Micronized Copper Azole with a minimum retention of 0.23 pcf.
6. Submit pressure treatment specifications prior to ordering timber. Pressure treatment specifications shall include type of treatment and retention level.
7. Pressure treated lumber shall not contact any metal except stainless steel fasteners and galvanized washers. Material and labor cost for rubber barrier and galvanized washers shall be included in Treated Timber.
8. The neoprene rubber barrier shall meet the material requirements of section 1052.02 (a) of the Standard Specifications.
9. Screws shall be driven such that boards are tightly clamped. Where screw threads in the top board push the boards apart screws shall be backed out and re-driven until the boards are tightly clamped. If re-driving does not tightly clamp boards other methods such as pre-drilling top boards shall be used.
10. The minimum width of any deck plank shall be 3". Planks shall be ripped on a table saw or by a circular saw with a guide to produce a straight and clean edge. Free hand ripping with a circular saw will not be permitted.
11. Adjacent deck boards shall have a maximum elevation difference of ¼".
12. Rail boards shall only terminate at Posts as shown in Section A-A and at the Section Thru Rail at Pier. Rail boards at each abutment shall be continuous over the last post and terminate as shown in the Railing Elevation at Abutments.
13. All boards shall be pressure treated No. 1 Southern Pine.
14. Deck vertical offsets can occur within a plank or between adjacent planks due to shake, cupping, vertical bowing, twisting or a combination of these (See offset defect examples). Planks with vertical offsets exceeding ½" shall be removed and replaced at the Contractor's expense. Vertical offsets due to cup, vertical bowing, twisting or a combination of these that are 12" or less from the face of the rail will not have to be remediated.
15. The warranty period for the timber deck shall be 2 years.



OFFSET DEFECT EXAMPLES

SUPERSTRUCTURE DETAILS
STRUCTURE B24.65

DESIGNED	JTH
CHECKED	DJH/KPC
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

3 TJP 11/14/2013

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SHEET NO. 3
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR		
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Plotted by: tjackman 11/14/2013 11:35:39 AM

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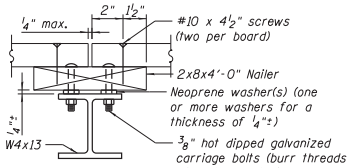
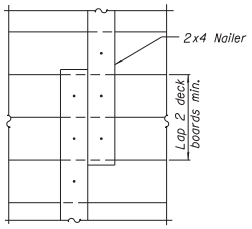
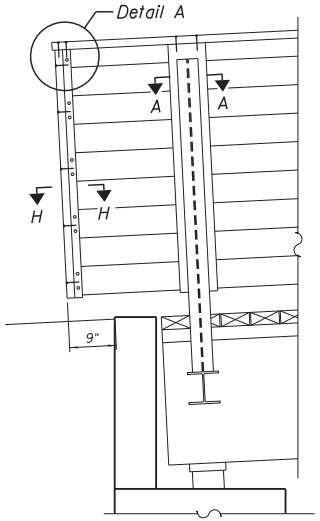


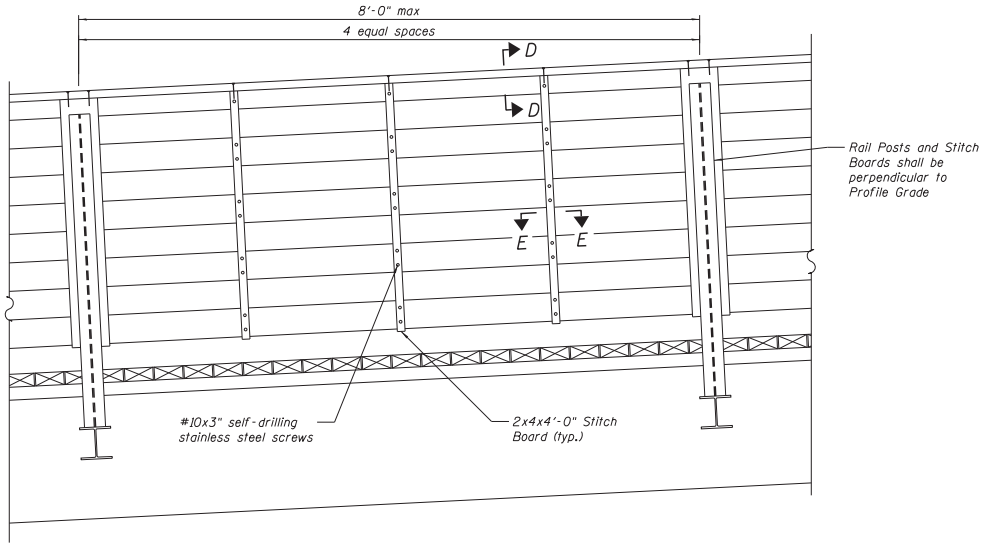
SECTION A-A
(Cut on this sheet and Sheet 3)



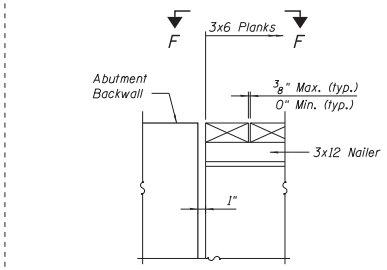
SECTION B-B
(Cut on Sheet 3)



RAILING ELEVATION AT ABUTMENTS



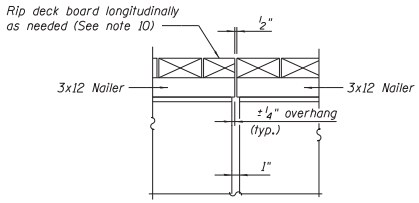
RAILING ELEVATION
(8'-0" rail spacing shown. For spacing less than 6'-0", use single 2x4 stitch board centered between posts)



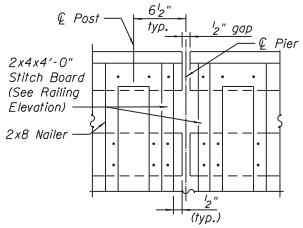
SECTION THRU DECK AT ABUTMENT

Deleted 3/8"x7"x10'-0" expansion plate and 3/8" stainless steel flat head machine screw.

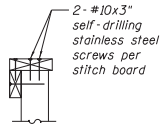
3



SECTION THRU DECK AT PIER



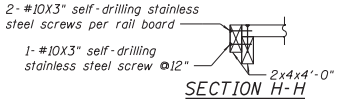
SECTION THRU RAIL AT PIER



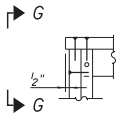
SECTION D-D

SECTION E-E

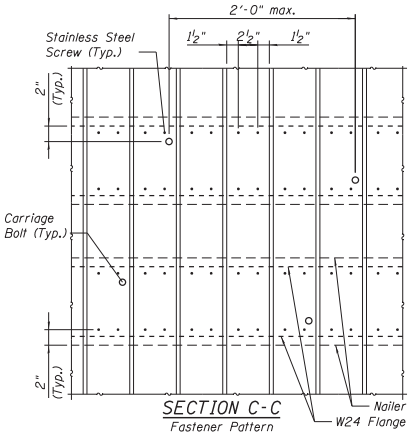
SECTION G-G



SECTION H-H

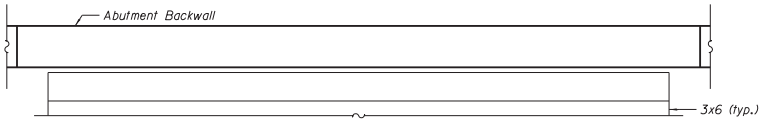


DETAIL A



SECTION C-C
Fastener Pattern at W24 Girders
(Cut on Sheet 3)

3



SECTION F-F

SUPERSTRUCTURE DETAILS
STRUCTURE B24.65

DESIGNED	JTH		
CHECKED	DJH/KPC	3	TJP 11/14/2013
DRAWN	JTH		
CHECKED	DJH/KPC		
DATE			

Plotted by: tjackman 11/15/2013 10:31:09 AM

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St Clair County Transit District

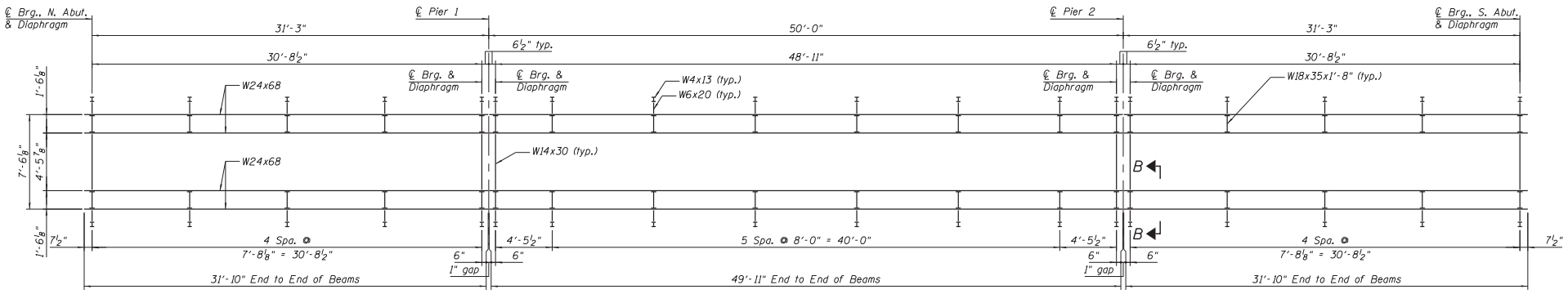
Metro

Bi-State Development Agency

SHEET NO. 4
14 SHEETS

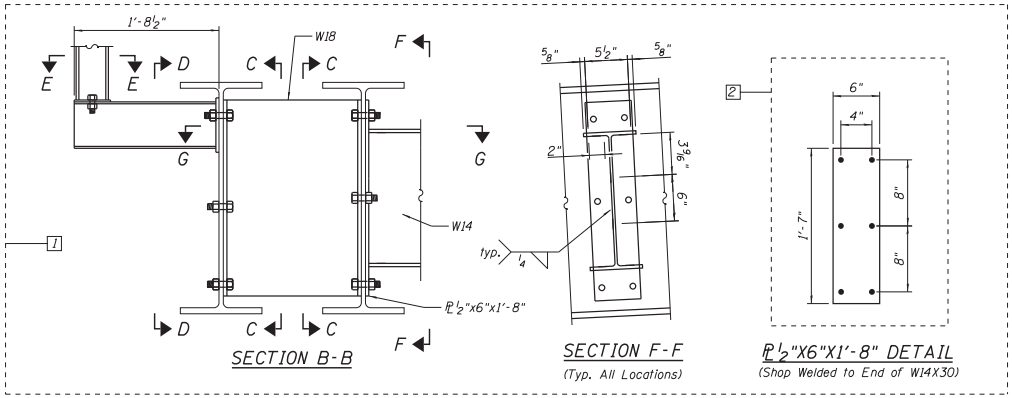
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	110
	MetroLink - Slopes Stabilization II	CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

P:\100008\4 CADD\4.6 ST\B24.65\B24.65-004-Superstructure Details - Rev. 3 - 11-14-2013.dgn



STEEL FRAMING PLAN

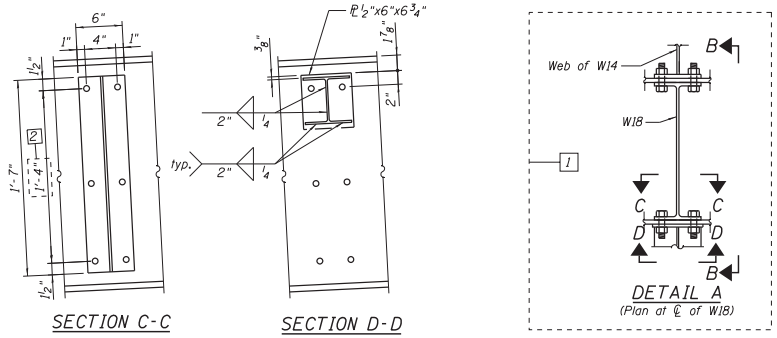
NOTES:
1. Holes for nailer carriage bolts shall be 7/16" diameter. See Section C-C on Sheet 4.
2. Cut ends of girder to be plumb in the erected position.



SECTION B-B

SECTION F-F
(Typ. All Locations)

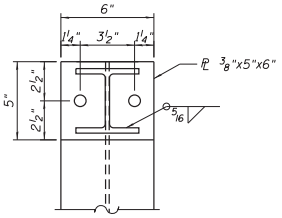
PL ½"X6"X1'-8" DETAIL
(Shop Welded to End of W14X30)



SECTION C-C

SECTION D-D

DETAIL A
(Plan at ℄ of W18)



SECTION E-E

FRAMING PLAN & FRAMING DETAILS STRUCTURE B24.65

DESIGNED	JTH			
CHECKED	DJH			
DRAWN	JTH	REVISED 1	9/9/2013	A.N.R.
CHECKED	DJH/KPC	REVISED 2	9/13/2013	A.N.R.
DATE				

Plotted by: grutz 9/13/2013 12:46:52 PM

P:\100008\4 CADD\4.6 ST\B24.65\B24.65-005-Framing Plan - Rev. 2 - 9-13-2013.dgn

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SHEET NO. 5
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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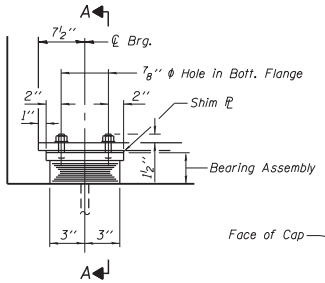
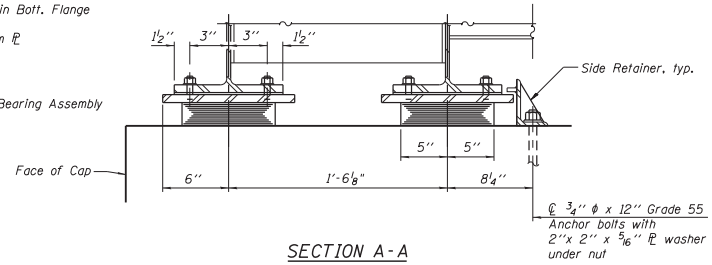
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 55 (Fy=55ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

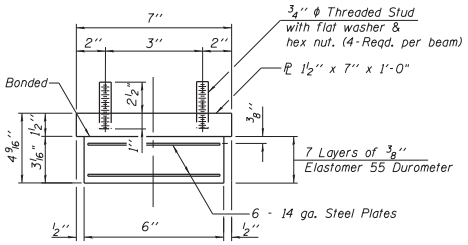
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

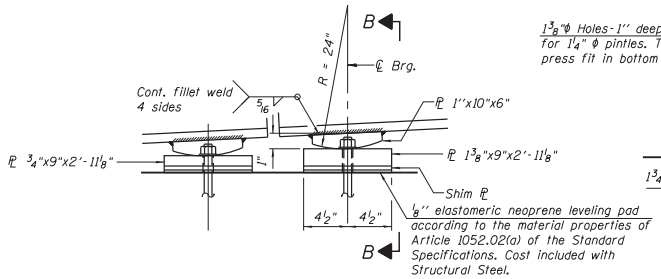
All steel plates, pintles and leveling pads required for the fixed bearing assembly shall be included in the cost of Fixed Bearing Assembly.



BEARING ASSEMBLY

Note:

Shim plates shall not be placed under Bearing Assembly.



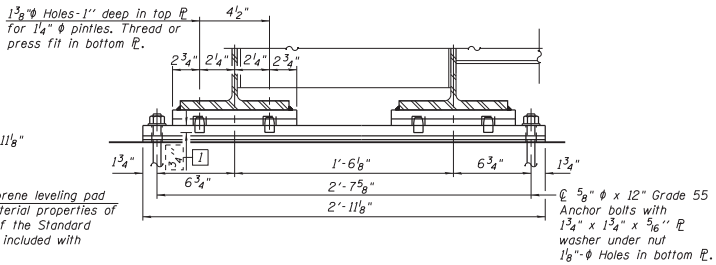
NORTH BEARING ASSEMBLY

(See South Bearing Assembly for information not shown)

SOUTH BEARING ASSEMBLY

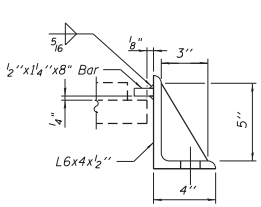
ELEVATION AT PIER

(Looking East)

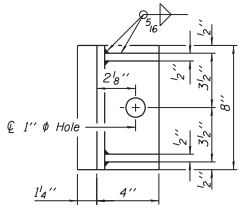


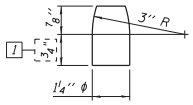
SECTION B-B

FIXED BEARING



SIDE RETAINER





PINTLE

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8
Fixed Bearing Assembly *	Each	8
⅝" ϕ Anchor Bolts	Each	16
¾" ϕ Anchor Bolts	Each	4

* Thickness of Bottom Bearing Plate varies. See Elevation at Pier.

BEARING DETAILS
STRUCTURE B24.65

DESIGNED	JTH	
CHECKED	DJH	
DRAWN	JTH	REVISED 1 8/12/2013 A.N.R.
CHECKED	DJH/KPC	
DATE		

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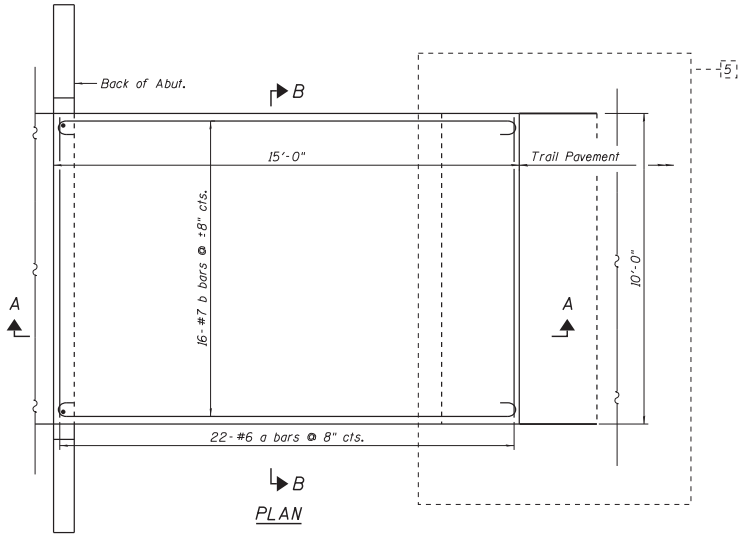
SHEET NO. 6
14 SHEETS

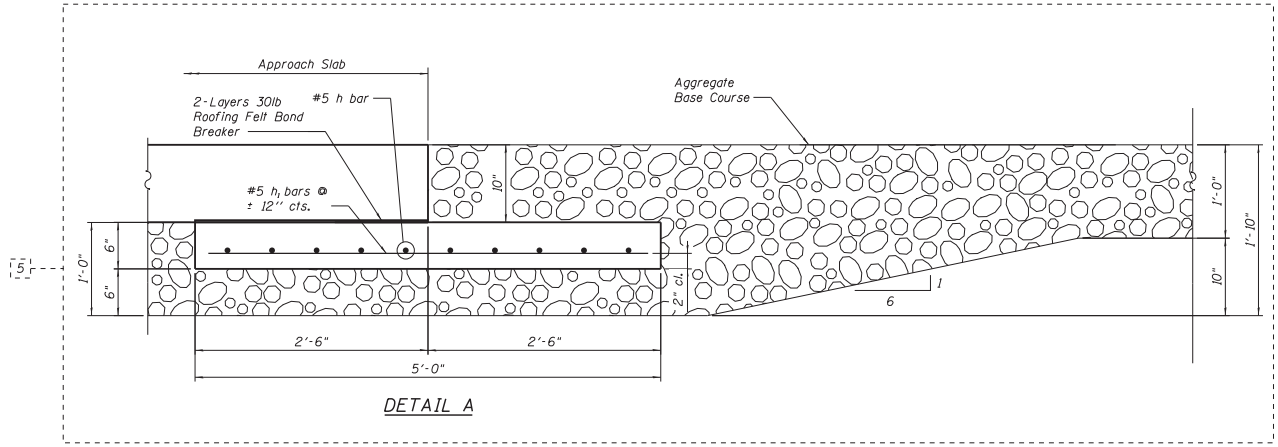
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	112
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

P:\100008\4 CADD\4.6 ST\B24.65\B24.65-006-Bearing Details - Rev.1- 8-12-2013.dgn

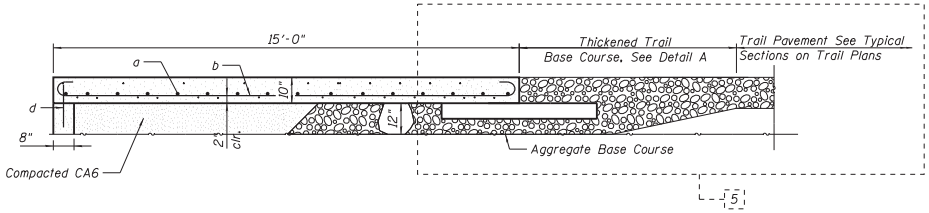
Plotted by: grutz 8/13/2013 9:07:30 AM



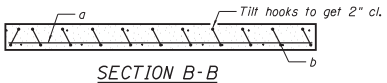
PLAN



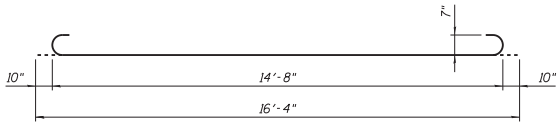
DETAIL A



SECTION A-A



SECTION B-B



BAR b

BILL OF MATERIAL (2 SLEEPER SLABS)

Bar	No.	Size	Length	Shape
h	20	#4	9'-8"	
h_1	18	#4	4'-8"	
Concrete Structures			Cu. Yd.	1.9
Reinforcement Bars			Pound	190

BILL OF MATERIAL (2 Appr.)

Bar	No.	Size	Length	Shape
a	44	#6	9'-8"	
b	32	#7	16'-4"	
Concrete Structures			Cu. Yd.	9.3
Reinforcement Bars			Pound	1710

All materials associated with approach slabs are included in the cost of Bridge Approach

APPROACH SLAB STRUCTURE B24.65

DESIGNED	JTH
CHECKED	MJJ/KPC
DRAWN	JTH
CHECKED	MJJ/KPC
DATE	

5 — TJP 4-3-2014

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SHEET NO. 7
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR		
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Plotted by: grutz 4/4/2014 10:17:21 AM

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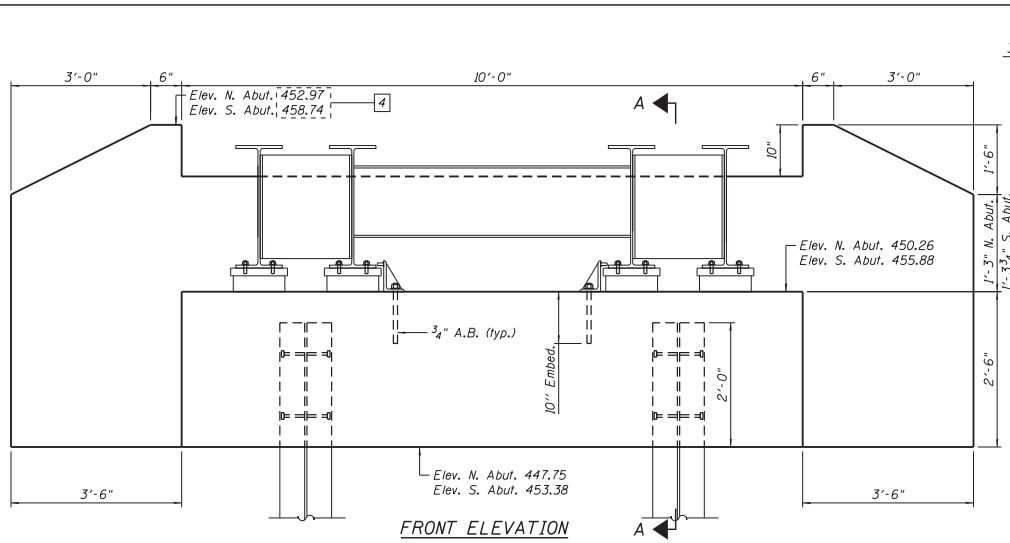
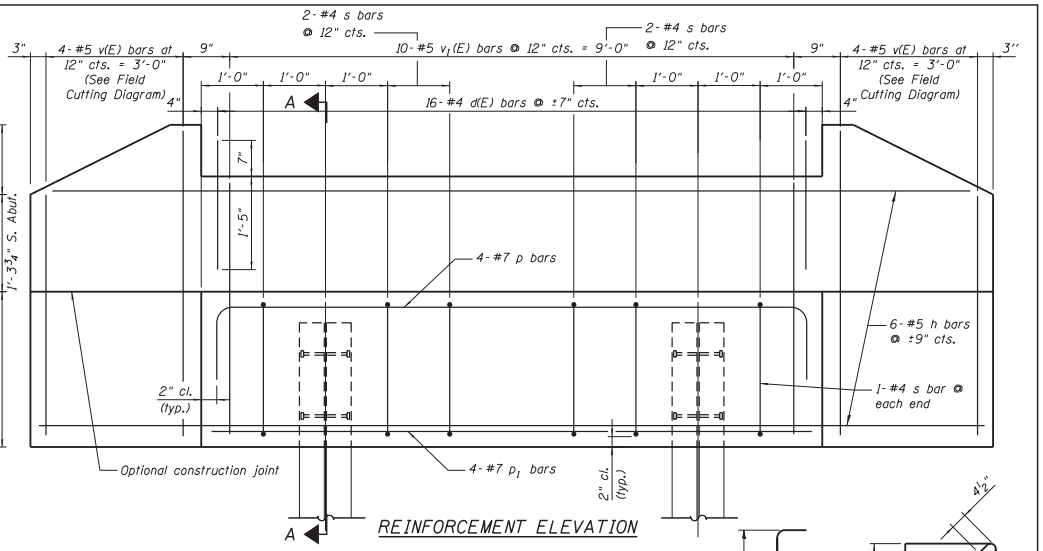
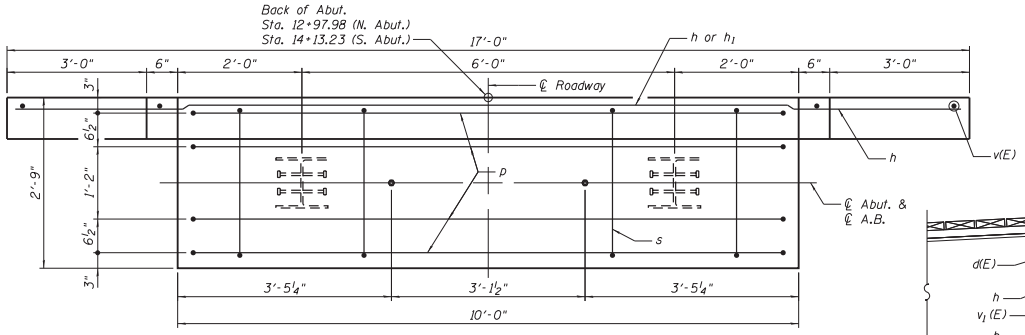


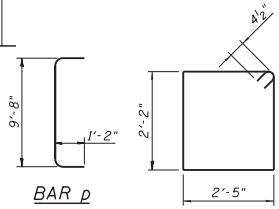
FRONT ELEVATION



REINFORCEMENT ELEVATION

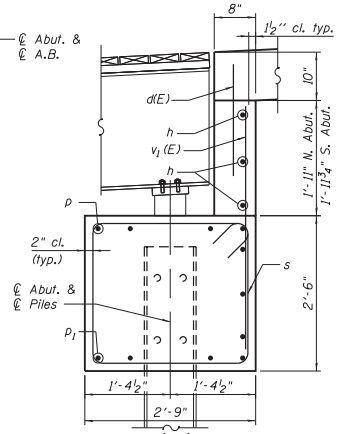


PLAN



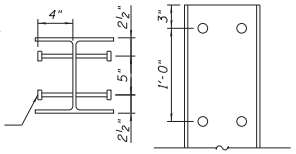
BAR p

BAR s

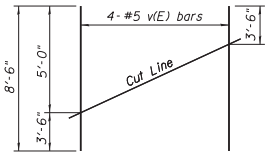


A-A

¾" ϕ Granular or solid flux filled headed studs automatically end welded to web. See article 505.08 of the Standard Specifications. Cost of the studs included in the cost of "Furnishing Steel Piles HP10x57".



PILE ANCHORAGE DETAIL



FIELD CUTTING DIAGRAM

Order 4-v(E) bars full length. Cut as shown and use remainder of bars in opposite wing.

Notes
1. For details of piles, see sheet 12.
2. Piles shall be painted from the bottom of the pile cap to a minimum of 6'-0" below ground line. See Special Provisions for "Cleaning and Painting Piles". The top 2' of the piles shall not be painted but shall be cleaned the same as the painted portion.

PILE DATA

Type:	HP 10x57 w/ pile shoes
Nominal Required Bearing:	335 kips
Factored Resistance Available:	167 kips
Est. Length:	58 ft. - N. Abutment
	46 ft. - S. Abutment
No. Production Piles:	1 at each Abutment
No. Test Piles:	1 at each Abutment

BILL OF MATERIAL (2 Abut.)

Bar	No.	Size	Length	Shape
h	12	#5	16'-8"	
d(E)	32	#4	2'-0"	
p	8	#7	12'-0"	
p_1	8	#7	9'-8"	
s	12	#4	9'-11"	
v(E)	8	#5	8'-6"	
v_1(E)	20	#5	4'-0"	
Structure Excavation			Cu. Yd.	22
Concrete Structures			Cu. Yd.	7.5
Reinforcement Bars			Pound	640
Reinforcement Bars, Epoxy Coated			Pound	200
Furnishing Steel Piles, HP 10x57			Foot	104
Test Pile Steel, HP 10x57			Each	2
Driving Piles			Foot	104
Pile Shoes			Each	4

ABUTMENT DETAILS
CAST IN PLACE OPTION
STRUCTURE B24.65

DESIGNED	JTH
CHECKED	DJH
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

4 DJH 12/2/2013

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SHEET NO. 8
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR		
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Plotted by: dhaldemer 12/2/2013 9:44:47 AM

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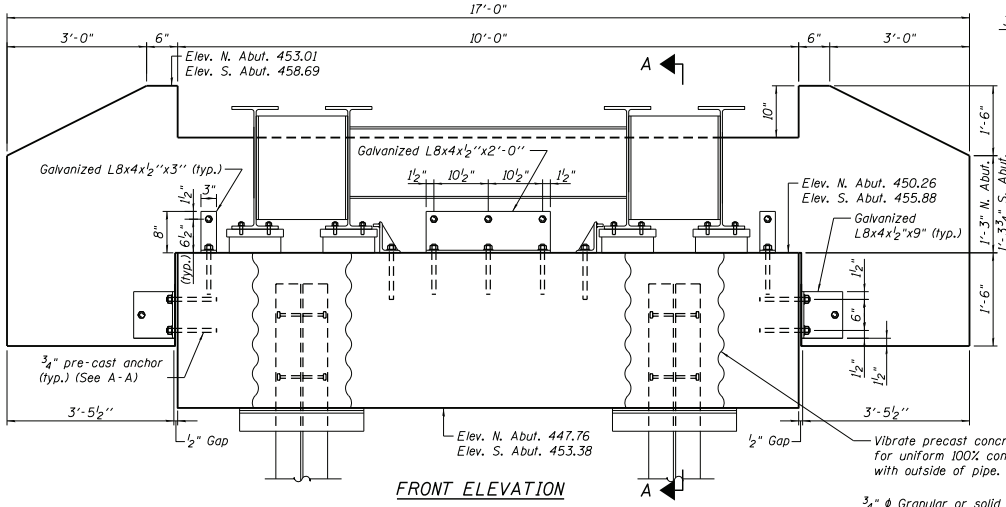
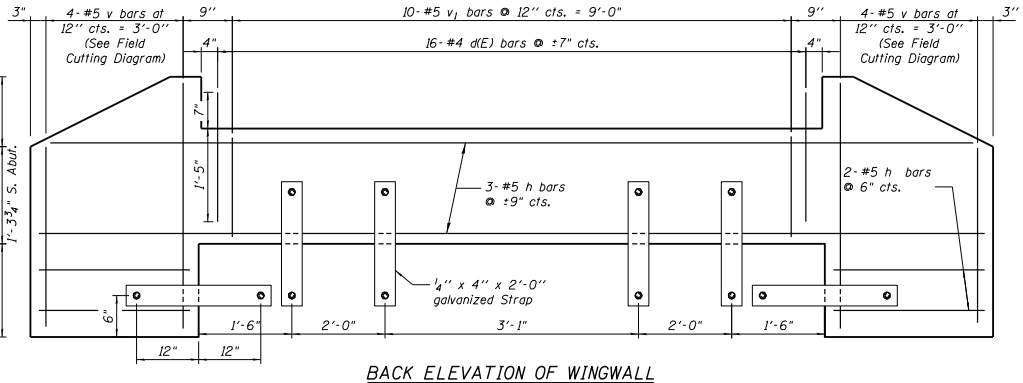
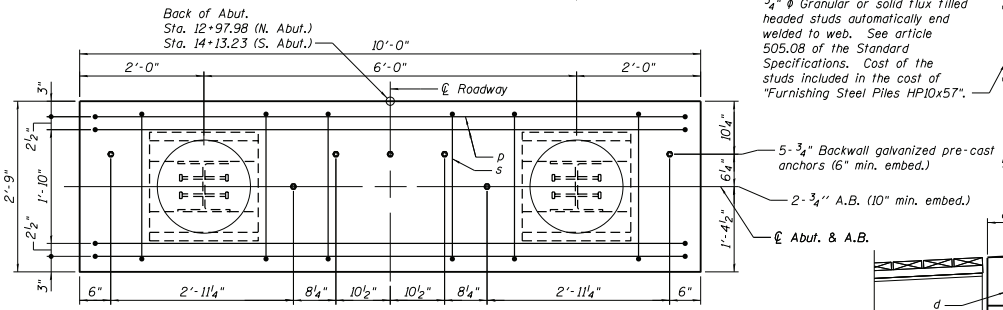


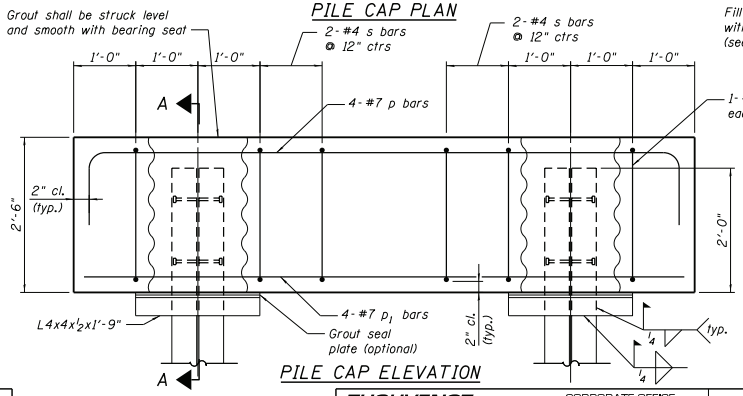
FRONT ELEVATION



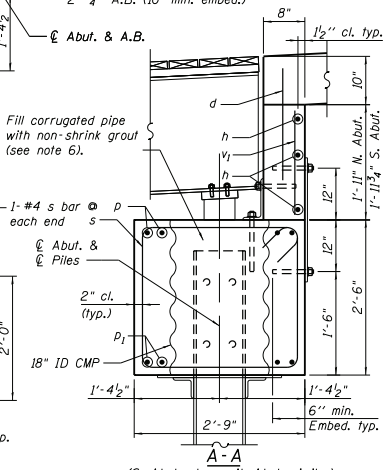
BACK ELEVATION OF WINGWALL



PILE CAP PLAN

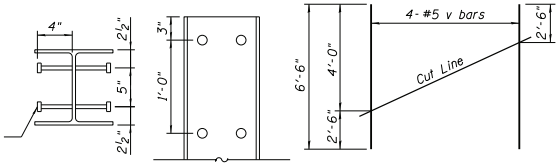


PILE CAP ELEVATION



A-A

(S. Abut. shown, N. Abut. similar)

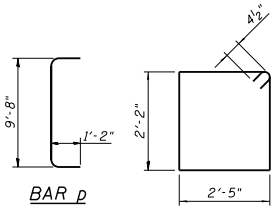


¾" ϕ Granular or solid flux filled headed studs automatically end welded to web. See article 505.08 of the Standard Specifications. Cost of the studs included in the cost of "Furnishing Steel Piles HP10x57".

PILE ANCHORAGE DETAIL

FIELD CUTTING DIAGRAM

Order 4-v bars full length. Cut as shown and use remainder of bars in opposite wing.



BAR p

BAR s

Notes

1. See sheet 11 for Optional Grout Seal Plate Detail
2. For details of piles, see sheet 12.
3. Cost of CMP, L4x4, L8x4½, Straps & pre-cast anchors shall be included in the cost of Concrete Structures.
4. Pre-cast anchors shall be hot dip galvanized expansion anchors.
5. Piles shall be painted from the bottom of the pile cap to a minimum of 6'-0" below ground line. See Special Provisions for "Cleaning and Painting Piles". The top 2'-0" of the piles shall not be painted but shall be cleaned the same as the painted portion.
6. See sheet 11 for corrugated metal pipe and non-shrink grout information.

PILE DATA

Type:	HP 10x57 w/ pile shoes
Nominal Required Bearing:	335 kips
Factored Resistance Available:	167 kips
Est. Length:	58 ft. - N. Abutment
	46 ft. - S. Abutment
No. Production Piles:	1 at each Abutment
No. Test Piles:	1 at each Abutment

BILL OF MATERIAL (2 Abut.)

Bar	No.	Size	Length	Shape
h	6	#5	16'-8"	
h_1	8	#5	3'-1"	
d(E)	32	#4	2'-0"	
p	8	#7	12'-0"	
p_1	8	#7	9'-8"	
s	12	#4	9'-11"	
v	8	#5	6'-6"	
v_1	20	#5	1'-6"	
Structure Excavation			Cu. Yd.	22
Concrete Structures			Cu. Yd.	7.5
Reinforcement Bars			Pound	800
Reinforcement Bars, Epoxy Coated			Pound	40
Furnishing Steel Piles, HP 10x57			Foot	104
Test Pile Steel, HP 10x57			Each	2
Driving Piles			Foot	104
Pile Shoes			Each	4

ABUTMENT DETAILS
PRECAST OPTION
STRUCTURE B24.65

DESIGNED	JTH
CHECKED	DJH
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

Plotted by: jheger 7/18/2012 7:34:17 AM

P:\100008\4 CADD\4.6 ST\B24.65\B24.65-009-Abutment Details Precast Option.dgn

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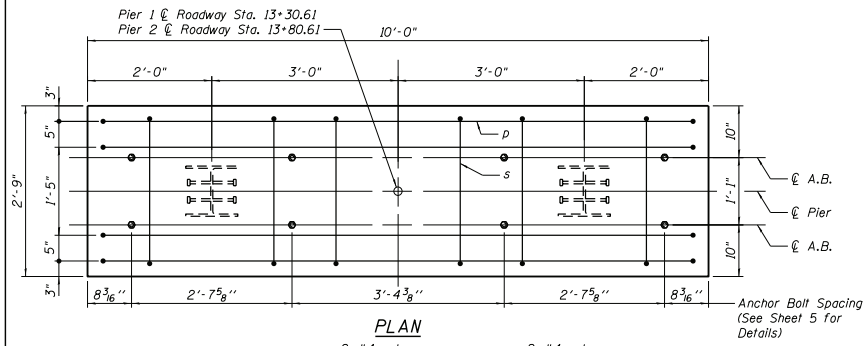
St Clair County Transit District

Metro

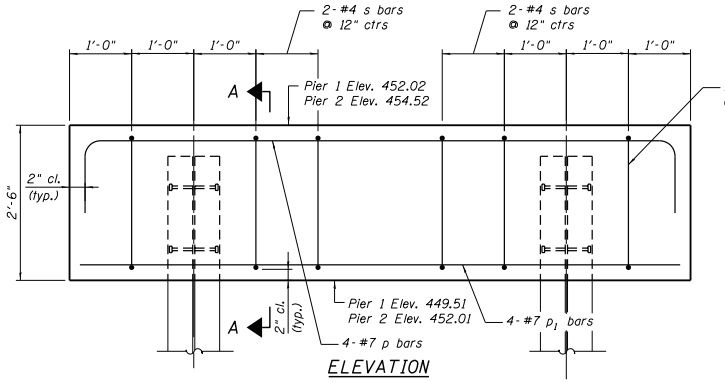
Bi-State Development Agency

SHEET NO. 9
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	115
	MetroLink - Slopes Stabilization II	CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



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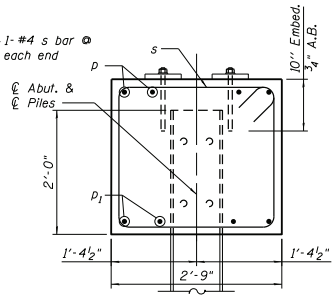
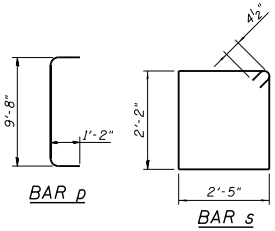


A-A



BAR p

BAR s

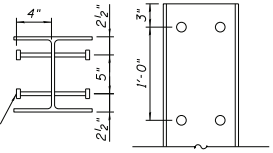
BILL OF MATERIAL (2 Piers)

Bar	No.	Size	Length	Shape
p	8	#7	12'-0"	
p_1	8	#7	9'-8"	
s	12	#4	9'-11"	
Concrete Structures		Cu. Yd.	5.1	
Reinforcement Bars		Pound	430	
Furnishing Steel Piles, HP 10x57		Foot	104	
Test Pile Steel, HP 10x57		Each	2	
Driving Piles		Foot	104	
Pile Shoes		Each	4	

Notes:

1. For details of piles, see sheet 12.
2. Piles shall be painted from 2'-0" above the ground line to a minimum depth of 6'-0" below ground line. See Special Provisions for "Cleaning and Painting Piles".

3/4" ϕ Granular or solid flux filled headed studs automatically end welded to web. See article 505.08 of the Standard Specifications. Cost of the studs included in the cost of "Furnishing Steel Piles HP10x57".



PILE ANCHORAGE DETAIL

PILE DATA

Type:	HP 10x57 w/ pile shoes
Nominal Required Bearing:	335 kips
Factored Resistance Available:	167 kips
Est. Length:	60 ft. - Pier 1
	44 ft. - Pier 2
No. of Production Piles:	1 at each pier
No. of Test Piles	1 at each pier

PIER DETAILS
CAST IN PLACE OPTION
STRUCTURE B24.65

DESIGNED	JTH
CHECKED	DJH
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

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Metro — Bi-State Development Agency

SHEET NO. 10
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	116
	MetroLink - Slopes Stabilization II	CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Plotted by: jheger 7/12/2012 7:22:54 AM

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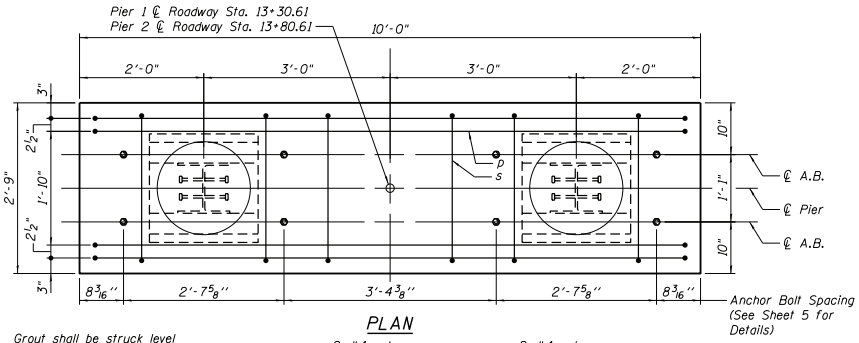
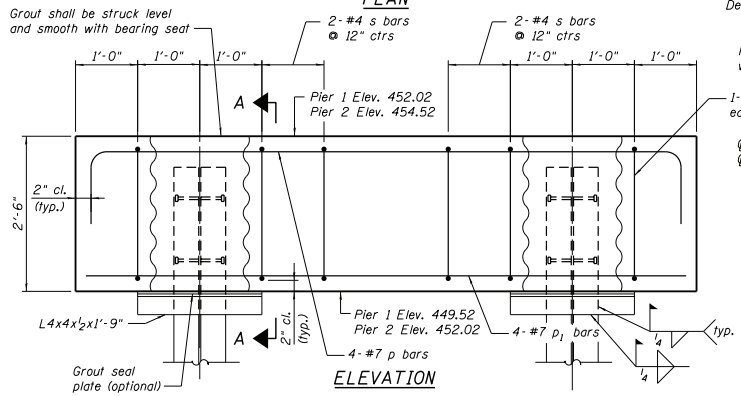


PLAN



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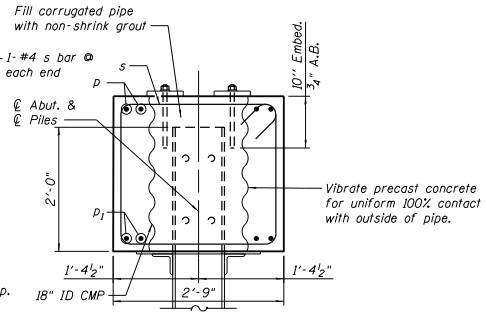
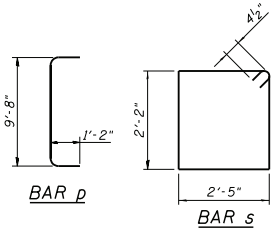


A-A

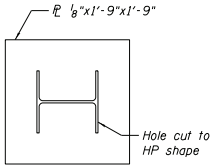
Notes:

1. For details of piles, see sheet 12.
2. CMP and L4x4 support angles shall be included in the cost of Concrete Structures.
3. Piles shall be painted from 2'-0" above the ground line to a minimum depth of 6'-0" below ground line. See Special Provisions for "Cleaning and Painting Piles". The top 2'-0" of the piles shall not be painted but shall be cleaned the same as the painted portion.
4. Corrugated Metal Pipe (CMP) shall be galvanized with annular corrugations. Corrugated Metal Pipe and Piles shall be cleaned to be free of surface oil, grease, dirt, laitance, rust, and loose material.
5. The temperature of the HP and corrugated pipe must be above 45° and below 90°. The HP and corrugated pipe may be cooled with water but the water must be drained prior to placing grout.
6. Non-shrink Grout shall be "Crystex" by L&M Construction Chemicals or an approved equal meeting ASTM C 1107 at a fluid consistency. The grout shall be mixed to a Flowable consistency per the manufacturer's specifications.
7. Non-shrink Grout shall have 30 pounds of ⅜" clean gravel added to the neat grout for every 55 pounds of grout. Addition of gravel shall be in accordance with the manufacturer's specifications. Clean gravel shall be ⅜"x¼" trap rock or ⅜" meramec pea gravel.
8. Non-shrink Grout shall be placed in three 10" lifts. Each lift shall be thoroughly rodded around the inside perimeter of the corrugated pipe and between the flanges on each side of the HP webs to insure 100% contact with the pipe and pile. Rodding shall penetrate the boundary between lifts.
9. Non-shrink Grout shall be cured according to the manufacturer's specifications.
10. A minimum of two non-shrink grout test cylinders shall be cast with each substructure unit. One cylinder shall be tested at 7 days and another at 28 days. Structural Steel may not be set in place until a grout strength of at least 5,000 psi is attained. The 28 day grout strength shall be 7,000 psi or greater.

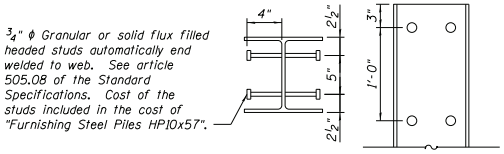


BILL OF MATERIAL (2 Piers)

Bar	No.	Size	Length	Shape
p	8	#7	12'-0"	
p_1	8	#7	9'-8"	
s	12	#4	9'-11"	
Concrete Structures			Cu. Yd.	5.1
Reinforcement Bars			Pound	430
Furnishing Steel Piles, HP 10x57			Foot	104
Test Pile Steel, HP 10x57			Each	2
Driving Piles			Foot	104
Pile Shoes			Each	4



OPTIONAL GROUT SEAL PLATE DETAIL



PILE ANCHORAGE DETAIL

PILE DATA

Type:	HP 10x57 w/ pile shoes
Nominal Required Bearing:	335 kips
Factored Resistance Available:	167 kips
Est. Length:	60 ft. - Pier 1 44 ft. - Pier 2
No. of Production Piles:	1 at each pier
No. of Test Piles:	1 at each pier

PIER DETAILS
PRECAST OPTION
STRUCTURE B24.65

DESIGNED	JTH
CHECKED	DJH
DRAWN	JTH
CHECKED	DJH/KPC
DATE	

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Metro — Bi-State Development Agency

SHEET NO. 11
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	117
	MetroLink - Slopes Stabilization II	CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Plotted by: jheger 7/12/2012 7:22:56 AM

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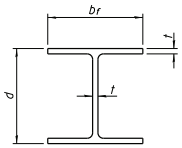
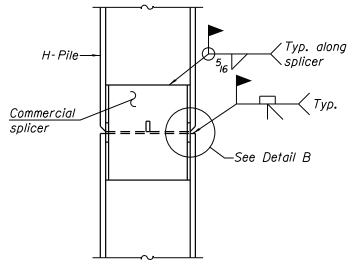


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t
HP 14x117	14 1/4"	14 7/8"	13/16"
x102	14"	14 3/4"	11/16"
x89	13 7/8"	14 3/4"	5/8"
x73	13 5/8"	14 5/8"	1/2"
HP 12x84	12 1/4"	12 1/4"	11/16"
x74	12 1/8"	12 1/4"	5/8"
x63	12"	12 1/8"	1/2"
x53	11 3/4"	12"	7/16"
HP 10x57	10"	10 1/4"	9/16"
x42	9 3/4"	10 1/8"	7/16"
HP 8x36	8"	8 1/8"	7/16"



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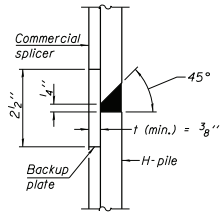
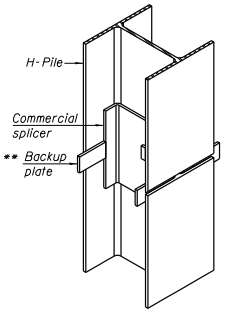
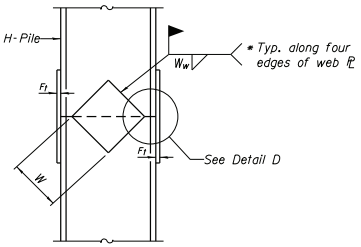


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



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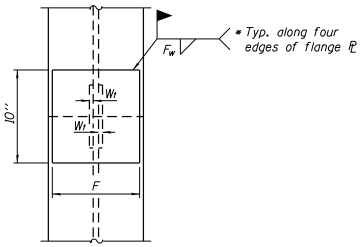
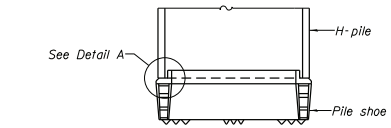


END VIEW



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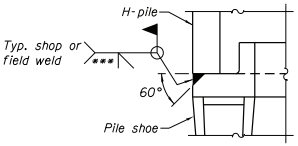
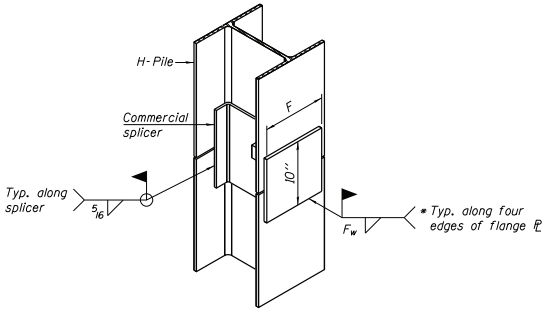


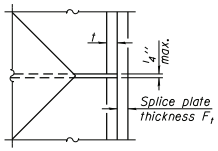
DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE



DETAIL D

Designation	F	F_f	F_w	W	W_f	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

PILE DETAILS
STRUCTURE B24.65

DESIGNED	
CHECKED	
DRAWN	
CHECKED	
DATE	

Plotted by: Theger 7/12/2012 7:22:58 AM

P:\100008\4 CADD\4.6 ST\B24.65\B24.65-012-Pile Details.dgn

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SHEET NO. 12
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	118
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

KEY TO SYMBOLS

Strata Symbols

- Fill
- USCS Silt
- USCS Low Pasticity Lean Clay
- USCS Clayey Sand
- USCS Low Pasticity Silty Clay
- Coal
- Limestone
- USCS Poorly-graded Sand
- Shale
- USCS Low to High Plasticity Clay
- Topsoil
- USCS High Plasticity Clay
- USCS Poorly-graded Gravel with Clay
- Interlayered Shale & Limestone
- USCS Poorly-graded Sand with Clay

Soil Samplers

- Split Spoon
- Shelby Tube

CU - Consolidated Undrained Triaxial Test Performed
DD - Dry Density
G_s - Specific Gravity
HYD - Hydrometer Test Performed
LL - Liquid Limit
MC - Moisture Content
NSD - Non-supplied Data
PI - Plasticity Index
PL - Plastic Limit
Qp - Pocket Penetrometer
RQD - Rock Quality Designation
UCS - Unconfined Compressive Strength
USCS - Unified Soil Classification System

LOG OF BORING B-24.65 E

Project Name: Proposed Access Road-Dutch Hollow Area
Project Location: Fairview Heights and Belleville, Illinois
Project Number: 6380
Elevation: 444.9 Feet
Date Drilled: 11/16/10
Drilling Contractor: Terra Drill, Inc.
Drilling Method: H.S.A. & Mud Rotary
Logged By: Horn/May

Elevation/ Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
0	11 11 12	5/18		Crushed Limestone, FILL			4	
440 – 5		11/24	CL-ML	Dark Gray-Brown Silty CLAY, Trace Sand, Roots, FILL	91	0.55 Qu	26	
	3 2 3	9/18	SP	Brown Fine SAND, with Silty CLAY Pockets, FILL			17	
435 – 10	2 3 1	11/19	ML	Dark Gray SILT, Possible FILL -Sandy Gravel Seam at 9.0 Feet		0.75 Qp	30	
			CL-ML	Dark Gray Silty CLAY				
430 – 15	1 1 1	16/18				0.25 Qp	29	No recovery in tube at 13 to 15 feet. Drove split spoon to obtain sample.
			CL	Dark Gray Lean CLAY				
425 – 20	WH 2 3	18/18				1.0 Qp	27	
				-Very Dark Gray-Brown below 22.0 Feet				
420 – 25	1 1 2	18/18				0.5 Qp	28	No recovery in tube at 23 to 25 feet. Drove split spoon to obtain sample.

(continued)

Notes:

GROUNDWATER
First Observed During Drilling - 24.0 Feet
At Completion - Not Available

Piezometer Installed: No

Shively Geotechnical
Missouri (314) 241-0900
Illinois (618) 398-1414

BORING LOG 5960 GINT BORING LOGS.GPJ IL_DOT.GDT 3/3/11

LOG OF BORING B-24.65 E (Cont.)

Project Name: Proposed Access Road-Dutch Hollow Area
Project Location: Fairview Heights and Belleville, Illinois
Project Number: 6380
Elevation: 444.9 Feet
Date Drilled: 11/16/10
Drilling Contractor: Terra Drill, Inc.
Drilling Method: H.S.A. & Mud Rotary
Logged By: Horn/May

Elevation/ Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
25				Dark Gray Lean CLAY (continued)				Switch to mud rotary at 25 feet.
415 – 30	3 3 4	16/18				2.75 Qp	24	
				Black COAL				
410 – 35	50/5"	5/5					32	
			CL	Green-Gray Shaley Lean CLAY (Highly Weathered Shale)				
405 – 40	19 22 30/3"	15/15				4.5+ Qp	15	
				Very Dark Green-Gray Clayey SHALE				Harder drilling at 41.5 feet.
400 – 45	30/4"	4/4				4.25 Qp	19	
				-Green-Gray below 47.0 Feet				
395 – 50	30/6"	6/6				2.75 Qp	17	
				TD - 49.0 Feet				

Notes:

GROUNDWATER
First Observed During Drilling - 24.0 Feet
At Completion - Not Available

Piezometer Installed: No

Shively Geotechnical
Missouri (314) 241-0900
Illinois (618) 398-1414

BORING LOG 5960 GINT BORING LOGS.GPJ IL_DOT.GDT 3/3/11

BORING B-24.65 E
STRUCTURE B24.65

DESIGNED	
CHECKED	
DRAWN	
CHECKED	
DATE	

Plotted by: jheger 7/12/2012 7:23:06 AM

THOUVENOT, WADE & MOERCHEN, INC.
CORPORATE OFFICE
4940 Old Collinsville Road
Swansea, Illinois 62226
Tel: 618.624.4488
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SWANSEA • WATERLOO • EDWARDSVILLE • CARBONDALE • ST. CHARLES

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EXCEPTIONAL SERVICE. NOTHING LESS.

St Clair County Transit District

Metro

Bi-State Development Agency

SHEET NO. 13
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	119
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

P:\100008\4 CADD\4.6 ST\B24.65\B24.65-013-Boring B24.65 E.dgn

LOG OF BORING B-24.65 W

Project Name: Proposed Access Road-Dutch Hollow Area
Project Location: Fairview Heights and Belleville, Illinois
Project Number: 6360
Elevation: 444.0 Feet
Date Drilled: 11/17/10
Drilling Contractor: Terra Drill, Inc.
Drilling Method: H.S.A. & Mud Rotary
Logged By: Horn/May

Elevation/ Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
0				Crushed Limestone, FILL				No sample at 1 foot due to augers kicking off.
			SP	Gray-Brown SAND, Trace Wood, Possible FILL				
440 / 5		14/24					7	
	8 5 5	0/18	CL	Dark Gray Lean CLAY				
435 / 10	2 2 2	10/18				0.25 Qp	30	
			CL-ML	Gray-Brown Silty CLAY				
430 / 15		12/24			97	0.75 Qu	27	
				-Very Dark Gray-Brown below 17.0 Feet				
425 / 20	1 2 4	18/18				1.75 Qu	37	
420 / 25		19/24			84	0.72 Qu	35	

(continued)

Notes:

GROUNDWATER
First Observed During Drilling - 24.0 Feet
At Completion - Not Available

Piezometer Installed: No

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Missouri (314) 241-0900
Illinois (618) 398-1414

LOG OF BORING B-24.65 W (Cont.)

Project Name: Proposed Access Road-Dutch Hollow Area
Project Location: Fairview Heights and Belleville, Illinois
Project Number: 6360
Elevation: 444.0 Feet
Date Drilled: 11/17/10
Drilling Contractor: Terra Drill, Inc.
Drilling Method: H.S.A. & Mud Rotary
Logged By: Horn/May

Elevation/ Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
25				Gray-Brown Silty CLAY (continued)				Switch to mud rotary at 25 feet.
415 / 30	2 2 3	15/18				0.5 Qp	31	
410 / 35	1 2 1	18/18				0.25 Qp	29	
			CL	Dark Gray-Brown Lean CLAY				
405 / 40	1 2 3	18/18				1.0 Qp	27	
				-Very Dark Gray, More Plastic 42.0 to 47.0 Feet				
400 / 45	2 2 3	17/18				1.25 Qp	30	
395 / 50	5 6 8	18/18				2.0 Qp	23	Driller note: Trace of Coal at 48 feet.

(continued)

Notes:

GROUNDWATER
First Observed During Drilling - 24.0 Feet
At Completion - Not Available

Piezometer Installed: No

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Illinois (618) 398-1414

LOG OF BORING B-24.65 W (Cont.)

Project Name: Proposed Access Road-Dutch Hollow Area
Project Location: Fairview Heights and Belleville, Illinois
Project Number: 6360
Elevation: 444.0 Feet
Date Drilled: 11/17/10
Drilling Contractor: Terra Drill, Inc.
Drilling Method: H.S.A. & Mud Rotary
Logged By: Horn/May

Elevation/ Depth (feet)	Graphic Log Sampler Symbols and SPT Blows	Rec. (in./in.)	USCS	Description	DD (pcf)	UCS (tsf)	MC (%)	Remarks
50				Dark Gray-Brown Lean CLAY (continued)				
				Olive-Gray Weathered LIMESTONE, with Clay				
390 / 55	10 16 30	16/18					12	
				Black SHALE				
385 / 60	50/5"	5/5					17	
				-Dark Green-Gray below 62.0 Feet				Hard drilling at 61.5 feet.
380 / 65	50/2"	2/2					18	
				TD - 63.7 Feet				
375 / 70								
370 / 75								

Notes:

GROUNDWATER
First Observed During Drilling - 24.0 Feet
At Completion - Not Available

Piezometer Installed: No

Shively Geotechnical
Missouri (314) 241-0900
Illinois (618) 398-1414

BORING B-24.65 W
STRUCTURE B24.65

DESIGNED	
CHECKED	
DRAWN	
CHECKED	
DATE	

Plotted by: jheger 7/12/2012 7:23:33 AM

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Metro
Bi-State Development Agency

SHEET NO. 14
14 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ST. CLAIR	181	120
MetroLink - Slopes Stabilization II		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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