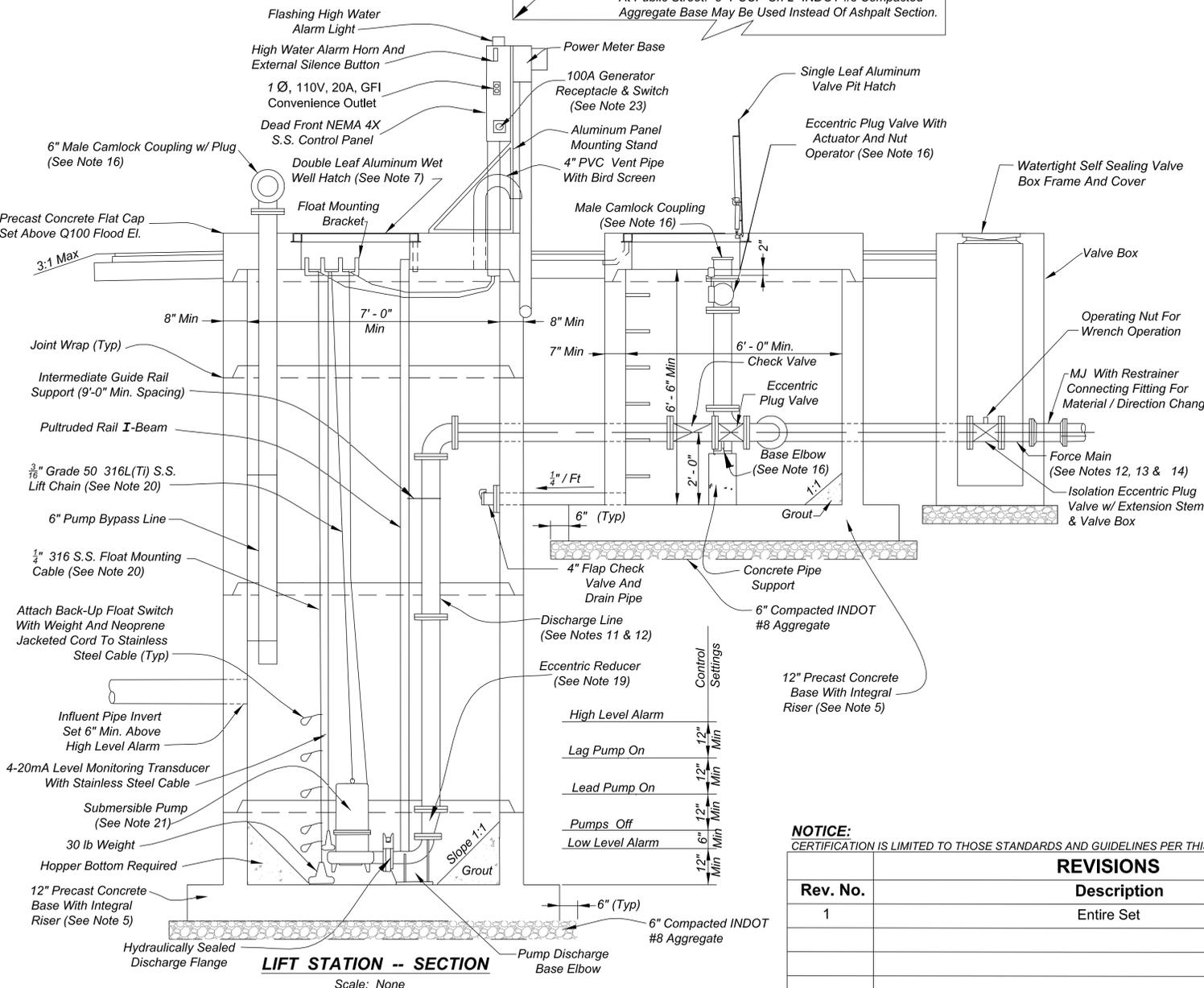


LIFT STATION -- PLAN

Scale: None

12' Wide Lane & LS Pad, 1 1/2" HMA Surface Type A On 2" HMA Binder Type A On 6" Compacted Aggregate Base INDOT #53 (2% Cross Slope). Build To And Provide 20' Radii At Public Street. 5" PCCP On 2" INDOT #8 Compacted Aggregate Base May Be Used Instead Of Asphalt Section.



LIFT STATION -- SECTION

Scale: None

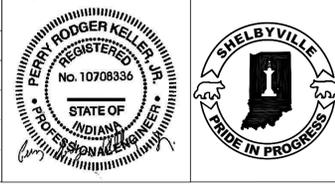
GENERAL NOTES:

- Lift Station Use Shall Be Only On A Temporary Basis Or As Necessary To Comply With The City Of Shelbyville Sanitary Sewer Master Plan.
 - Actual Lift Station Dimensions, Control Settings, & Pump Selection To Be As Indicated By The Design Engineer's Certification Sheet.
 - City May Require Lift Station Perimeter To Be Fenced. If A Fence Is Required, Fence Shall Be Coated Chain Link. Gate(s) Shall Be Wide Enough To Permit Passage Of A Pump And Any Hauling Equipment.
 - Lift Station And Valve Pit Manholes Shall Be Precast Concrete In Accordance With ASTM C-478, With Rubber Gaskets Equal To ASTM-443 With 1/2" Gasket Material Or City Of Shelbyville Approved Equal. See Sanitary Sewer Details And Notes Sheet 12 For Manhole Steps.
 - Concrete Lift Station Structure Shall Be Designed Based On Site Conditions To Resist Any Buoyancy Forces That May Be Encountered.
 - All Lift Station Exterior Vertical Surfaces Shall Be Dampproofed With Hydrocide 700 Mastic Bituminous Coating.
 - Aluminum Hatches Shall Be Channel Frame Type Flygt Safe-Hatch Or Approved Equal. Leaf Shall Be 1/2" Aluminum Diamond Plate Live Load Rated To 300 PSF. Channel Frame Shall Be 1/2" Extruded Aluminum With A Mill Finish And Bituminous Coating On Exterior Surfaces. Hatch Shall Be Provided With Type 316 S.S. Hardware Throughout, Automatic Hold-Open Arm With Release Handle, Slam Lock With Removable Handle, And 1-1/2" Drain Coupling.
 - All Manholes And Lift Stations Receiving Discharge From A Forcemain Shall Be Coated With A City Approved Epoxy Or Polyurethane Coating Such As Culy Microsilica Cement Mortar And Epoxy Corrosion Barrier Or Approved Equal.
 - Sewer Connection To Wet Well Shall Be KOR-N-SEAL, A-LOK, Dura-Seal, Or City Of Shelbyville Approved Equal.
 - Force Main Penetrations Of Wet Well And Valve Pit Shall Be Core Drilled And Made Watertight Through Use Of KOR-N-SEAL, A-LOK, Dura-Seal, Or City Of Shelbyville Approved Equal.
 - Piping And Fitting In Wet Well And Valve Pit Shall Be Factory Primed Tnemec Series 140-1211 To A Dry Film Thickness Of 5.0 To 11.0 Mils And Shall Be Field Painted With Tnemec Series 69-Color To A Dry Film Thickness Of 5.0 To 6.0 Mils. Fittings Shall Be Manufactured By Clow, Tyler, Mueller, Or As Approved By City Of Shelbyville.
 - Piping Not Within 2 Feet Of Wet Well And Valve Pit Shall Be DI AWWA C151, HDPE AWWA C906, PVC ASTM D2241, PVC AWWA C900, Or City Of Shelbyville Approved Equal. See Design Engineer's Certification Sheet For Pipe Class.
 - For All Force mains, Contractor Shall Install 10-Gauge Insulated, Solid Copper Tracer Wire And Polyethylene Identification Tapes. Both Items Shall Be Highly Resistant To Alkalis, Acids, And Other Destructive Agents Found In Soil. The 10-Gauge Tracer Wire Shall Be Directly Attached To The Outside Of The Forcemain Pipe Every 10 Feet. The Polyethylene Identification Tape Shall Have A Minimum Thickness Of 4 Mils And Shall Be Placed Directly Over The Pipe 18" Below Final Grade.
 - Pressure Gauge Shall Be Terrec Model 450 LFB Or City Of Shelbyville Approved Equal. Drill & Tap Run Of Pipe To Install Pressure Gauge.
 - Camlock Coupling And Eccentric Plug Valve On By-Pass Line Shall Be 6 Inch Diameter With Transition To Force Main Size Occurring With Concentric Reducer Placed On Top Of Base Elbow. Fix Operating Nut For Eccentric Plug In Vertical Position To Enable Wrench Operation From Surface. Layout Of All Valve Vault Fittings And Equipment To Be Based Upon By-Pass Line Being Up Close To Hatch Opening As Shown.
 - Plug Valve Shall Be An Eccentric Buna N Rubber Faced Plug With Hand Lever Operation In-Line And Gear Operation On By-Pass. Valve Shall Be Valmatic F-5800-R, Clow F-5412, Or As Approved By City Of Shelbyville. The Valve Shall Be Furnished With Fusion Bonded Epoxy Coating Inside And Out In Accordance With AWWA C-550.
 - Check Valve Shall Be Bronze Seated, Rubber Coated, And Shall Be Provided With Bolted Covers For Easy Access To The Discs. Valve Shall Be Outside Adjustable Weight & Lever As Mueller A-2600-6-01, Clow F-5382, Or As Approved By City Of Shelbyville. The Valve Shall Be Furnished With Fusion Bonded Epoxy Coating Inside And Out In Accordance With AWWA C-550.
 - Eccentric Reducer Shall Be Installed As Required For Force Main Size. Consult City Of Shelbyville Waste Water Department If Force Main Piping Is Greater Than 6-Inch Diameter.
 - Provide Sufficient Lift Chain, Float Mounting Cable, And Pump Power & Sensor Cable To Enable Non-Spliced Field Adjustment. Lift Chain Shall Have A Minimum Work Load Limit Of 1100 Pounds. Float Mounting Cable Shall Be Held In Place By Its Own Spring. Floats Shall Be Fastened To Cable With S.S. Clamps Near Each Float Location. Pump Power & Sensor Cable Shall Be Suitable For Submersible Pump Applications And This Shall Be So Indicated By A Code/Legend Permanently Embossed On The Cable.
 - Pumps "A" And "B" Shall Be Identical, Centrifugal, And Submersible. Pumps Shall Be Hydromatic Or Flygt Grinder Or Chopper Pumps Or City Approved Equal. Fit Replaceable Bronze Wear Ring To Volute. Manufacturer Shall Warrant The Pumps For Five Years After Installation With Pro-Rated Warranty.
- All Mating Surfaces Intended To Be Watertight Shall Be Machined And Fitted With Nitrile Rubber O-Rings With Sealing Complete When Metal - To - Metal Contact Is Made, Resulting In Controlled Compression Of O-Rings Without Specific Torque Limit. Fasteners Shall Be 316 S.S.
- Mechanical Shaft Seal System Running In An Oil Reservoir Shall Have Separate, Constantly Lubricated Lapped Seal Faces. The Lower Seal Unit Between Media And Oil Reservoir Shall Consist Of One Stationary Seat And One Rotating Ring Held In Place By Its Own Spring. The Rotating Seal Ring And The Stationary Seal Ring Shall Be Made Of Tungsten-Carbide. The Lower Seal Shall Be Removable Without Disassembling The Seal Chamber. The Upper Seal Between Seal Chamber And Motor Shall Be Of The Same Design With Its Own Spring. Seals Shall Be Maintenance Free, But Shall Be Easily Inspectable.
- Lower Seal Failure Alarm Shall Be Engaged By Seal Failure Sensor Provided In The Seal Chamber Which Senses Water Intrusion Through The Lower Seal.
- Overtemperature Alarm And Pump Shut-Down Shall Be Engaged By Heat Sensor Attached To The Motor Windings. Motor Winding And Stator Lead Insulation Shall Be Class F With Maximum Temperature Capability Of 155°C Or Better. Housing Shall Be Filled With High-Dielectric Oil. Air Filled Housing May Be Acceptable When Approved By City Of Shelbyville. Pump And Motor Shall Be Designed To Operate Partially Or Fully Submerged In Pumped Media Without The Use Of Cooling Jackets.
- Rail System Shall Enable The Easy Removal Of The Pump Without The Need For A Person To Enter The Wet Well. A Non-Corrosive FRP I-Beam Shall Be Provided For Each Pump. The Guide Rail Shall Be Supported At The Bottom By The Discharge Elbow, Aligned Perfectly Plumb And Securely Affixed To Access Frame. One Intermediate Guide Rail Support Is Required For Each 9' Of Guide Rail Length. Schedule 40 S.S. Guide Rails May Be Acceptable If Pump Is Approved By City Of Shelbyville.

NOTICE:

CERTIFICATION IS LIMITED TO THOSE STANDARDS AND GUIDELINES PER THIS SHEET. CONSTRUCTION IS SUBJECT TO CONSTRUCTION DRAWINGS, SHOP DRAWINGS, AND DESIGN ENGINEER'S CERTIFICATION SHEET.

Rev. No.	Description	Date
1	Entire Set	07/26/2011



CITY OF SHELBYVILLE

SANITARY SEWER LIFT STATION STANDARDS AND GUIDELINES

SHEET

14

OF

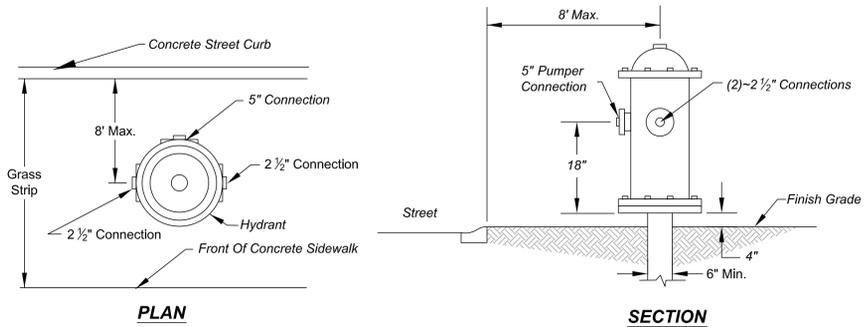
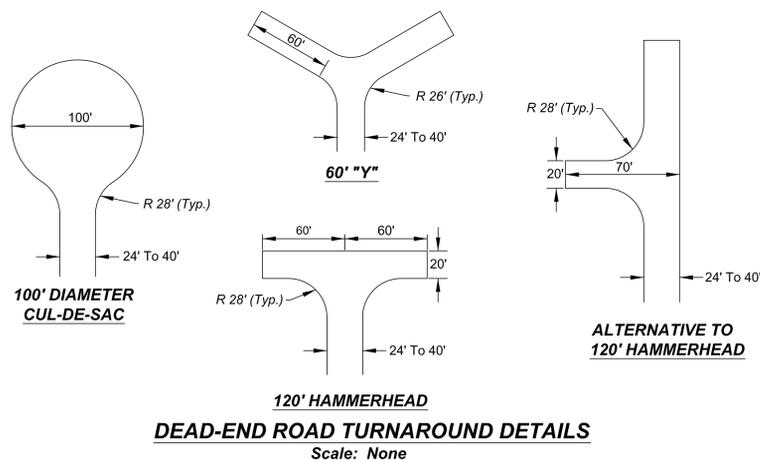
18

FIRE DEPARTMENT GENERAL NOTES

- 1.) A Water Distribution Plan Shall Be Submitted As Part Of The Site Development Plans And Approved By The City Of Shelbyville Tech Review Committee Prior To Issuance Of An Improvement Location Permit. The Water Distribution Plan Shall Include The Following Items:
 - A. Existing And Proposed Water Mains With Sizes Denoted
 - B. Location Of Existing And Proposed Fire Hydrants
 - C. Location Of Proposed Fire Protection Equipment (FDC, PIV, Etc.)
- 2.) An Approved Water Supply Capable Of Supplying The Required Fire Flow For Fire Protection Shall Be Provided To Premises Upon Which Facilities, Buildings, Or Portions Of Buildings Are Hereafter Constructed.
- 3.) Water Distribution Mains Shall Be Looped Or Designed To Facilitate Future Looping As Appropriate. Distribution Mains For Commercial And Industrial Structures Shall Be Minimum 8 Inches In Diameter Or As Determined By The Shelbyville Fire Department And Indiana American Water.
- 4.) All Water Mains Shall Be Minimum 8 Inches In Diameter. All Hydrant Feeder Lines Shall Be Minimum 6 Inches In Diameter. All Public And Private Water Mains And Appurtenances Shall Meet Indiana American Water Company And American Water Works Association (AWWA) Specifications.
- 5.) All Fire Hydrants and FDCs Shall Be Bagged Prior To Being Placed In Service.
- 6.) A Minimum Of Two Means Of Access Shall Be Provided For:
 - A. Any Subdivision With 50 Or More Single Or Double Family Residential Lots;
 - B. Any Development Having One Or More Commercial, Multi-Family, Institutional, Or Industrial Structures 3 Stories Or Greater In Height; Or
 - C. Any Development Having 3 Or More Commercial, Multi-Family, Institutional, Or Industrial Structures Of Any Height.
- 7.) Fire Department Accessibility Shall Not Be Obstructed In Any Manner, Including The Parking Of Vehicles. Fire Apparatus Access Shall Have A Minimum Unobstructed Width Of 26 Feet, Measured From The Outside Of The Building Sidewalk And Foundation Landscaping, And A Minimum Unobstructed Vertical Clearance Of 13 Feet 6 Inches, Except For:
 - A. Truck Dock Areas Designed For Loading And Unloading
 - B. Areas Used For Trash Compactors
 - C. Parking Areas Approved By The Shelbyville Fire Department
- 8.) Approved Fire Apparatus Access Roads Shall Be Provided For Every Facility, Building, Or Portion Of A Building Hereafter Constructed Or Moved Into Or Within The City Of Shelbyville. The Fire Apparatus Access Roads Shall Extend To Within 150 Feet Of All Portions Of The Facility Or Any Portion Of The Exterior Wall Of The First Story Of The Building. Apparatus Access Road Shall Be Constructed Of Driveable Grass, Asphalt, Or Concrete And Be Designed To Adequately Support Fire Vehicle Loads Of 75,000 Pounds Or Greater.
- 9.) Fire Apparatus Access Road Shall Be Constructed And Made Serviceable Prior To Start Of Building Construction. Fire Apparatus Access Roads Shall Not Be Obstructed In Any Manner, Including The Parking Of Vehicles. The Apparatus Access Road Shall Have A Minimum Unobstructed Horizontal Width Of 24 Feet And Vertical Clearance Of 13 Feet 6 Inches At All Times.
- 10.) Knox Boxes Are Required For All Commercial, Industrial, Institutional, Apartment, And Townhouse Buildings And Shall Be Mounted In Accordance With The Specific Directions Of The Shelbyville Fire Department. Required Number Of Knox Boxes Shall Be Determined By The Shelbyville Fire Department.
- 11.) Alarm Panel Shall Be Located Near The Front Door.
- 12.) Electrical Rooms, Riser Rooms, Roof Access, Basement Access, And Alarm Rooms Shall Be Labeled In Minimum 3-inch Letters And Shall Be Of Reflective Material.
- 13.) No Smoking Signs Shall Be Located Near All Outside Doors.
- 14.) Vehicle Impact Protection Shall Be Installed For Gas Meters.
- 15.) New And Existing Buildings Shall Have Approved Address Numbers Plainly Legible And Visible From The Road Along The Property Frontage. These Numbers Shall Contrast With Their Background. Address Numbers Shall Be Arabic Numerals Or Alphabet Letters. Numbers Shall Be A Minimum Of 4 Inches High With A Minimum Stroke Width Of 0.5 Inches.
- 16.) Temporary Building Address Signs Shall Be Installed At The Start Of Construction For All New Buildings. Temporary Address Signs Shall Meet The Requirements In Note 15.
- 17.) Streets And Roads Shall Be Identified With Approved Signs. Temporary Signs Shall Be Installed At Each Street Intersection When Construction Of New Roadways Allows Passage By Vehicles. Signs Shall Be Of An Approved Size, Weather Resistant, And Be Maintained Until Replaced By Permanent Signs.
- 18.) All Roads Or Drives Which Dead-End That Are In Excess Of 150 Feet In Length Shall Be Designed With Width And Turnaround Provisions In Accordance With The Dead-End Road Turnaround Detail On This Sheet. All Roads Or Drives With Fire Apparatus Access Shall Have A Minimum Unobstructed Vertical Clearance Of 13 Feet 6 Inches.
- 19.) All Other Items Not Specifically Stated Herein Shall Be In Accordance With The Most Recently Adopted Edition Of The Indiana Fire Code, NFPA, The International Fire Code, and Indiana General Administrative Rules.
- 20.) For Required Inspections, Contact Shelbyville Fire Department 24 Hours Prior To Inspection At 317-392-5119.

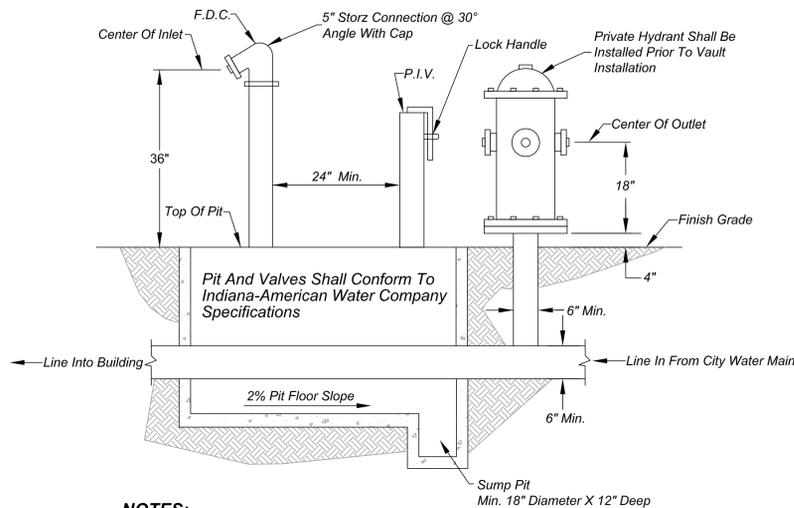
TABLE 20: DEAD-END ROAD REQUIREMENTS

LENGTH (ft)	WIDTH (ft)	TURNAROUNDS REQUIRED
0-150	24-40	None
151-500	24-40	Cul-de-Sac, Hammerhead, Or "Y"
501-600	24-40	Cul-de-Sac, Hammerhead, Or "Y"



FIRE HYDRANT LOCATION WITHIN R/W

Scale: None



FIRE HYDRANT AND CONNECTION DETAILS

Scale: None

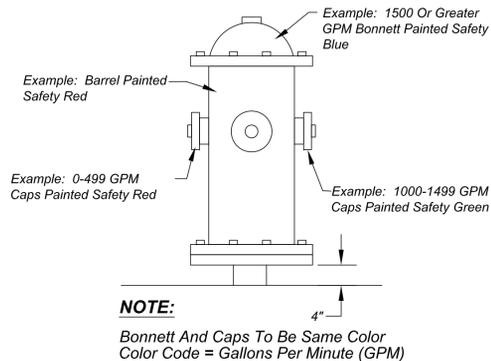


TABLE 21: PRIVATE HYDRANT COLOR CODING

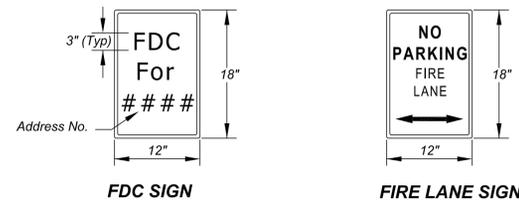
CLASS	GPM	COLOR
AA	1500 Or Greater	Safety Blue
A	1000 To 1499	Safety Green
B	500 To 999	Safety Orange
C	Less Than 499	Safety Red

FIRE HYDRANT NOTES

- 1.) Fire Hydrants Shall Not Be Located More Than 500 Feet Apart. Shelbyville Fire Department Reserves The Right To Require Less Hydrant Spacing For Large Buildings. All Hydrants Shall Be Located A Minimum 1 1/2 Times Outside The Collapse Zone Of The Building. All Fire Hydrants Within City Right-Of-Way Shall Be Located Between The Curb And Sidewalk As Shown Herein. The 5 1/2 Inch Connection Shall Face The Street.
- 2.) Fire Hydrant Outlets Shall Be Located No Further Than 8 Feet From The Edge Of Pavement.
- 3.) All Fire Hydrants Shall Be Installed, Functional, And Approved By The Fire Inspector Prior To Start Of Building Construction.
- 4.) Fire Hydrants Shall Have A Maintained 3 Foot Radial Clear Space At All Times.
- 5.) The Size Of The Main Valve Opening And The Size Of The Hydrant Barrel Shall Be Suitable For Required Fire Protection.
- 6.) Dry Hydrants Shall Be Reviewed And Approved By The Fire Department. Dry Hydrants Shall Be Placed Within 8 Feet Of Roadway. Connection Shall Be 4 1/2 Inch Male, National Standard Thread. Center Of Connection Shall Be 32 Inches Above Finished Grade With A Cap And Chain. Dry Hydrant Shall Comply With NFPA Standard 1142, Ch.8.
- 7.) Private Water Hydrants Shall Be Painted Safety Red In Color, Flow Tested, And Painted To Meet NFPA Standards As Shown Herein. See NFPA Standards 24 and 291, And Table 21, This Sheet.

FIRE DEPARTMENT CONNECTION (FDC) NOTES

- 1.) The FDC Shall Not Be Located More Than 50 Feet From The Nearest Fire Hydrant. The FDC Shall Be Located A Minimum 1 1/2 Times Outside The Collapse Zone Of The Building.
- 2.) The FDC Shall Meet Or Exceed The Requirements Of The Most Recent State Of Indiana Adopted Edition Of NFPA 13 and NFPA 14.
- 3.) The FDC Shall Be Provided With A Single 5 Inch Storz Connection That Shall Face Towards The Nearest Point Of Fire Department Access.
- 4.) A Minimum 4 Inch FDC Service Pipe Shall Be Utilized On A Fire Service Line That Is 6 Inches Or Larger.



NOTES:

1. FDC and Fire Lane Signs Shall Be Constructed Out Of A Material That Is Not Susceptible To Degradation. The Sign Material Shall Be Approved By The Shelbyville Fire Department.
2. The Sign Lettering Shall Be Red In Color With A White Reflective Background.
3. Signs Shall Be Supported By An Approved Permanent Post. FDC Signs May Be Attached To The FDC By An Approved Method.
4. If Freestanding, The Top Of The Sign Shall Be Mounted Between 36 Inches And 48 Inches From Finished Grade.

FDC AND FIRE LANE SIGN DETAILS

Scale: None

FIRE LANE PARKING DETAIL

Scale: None

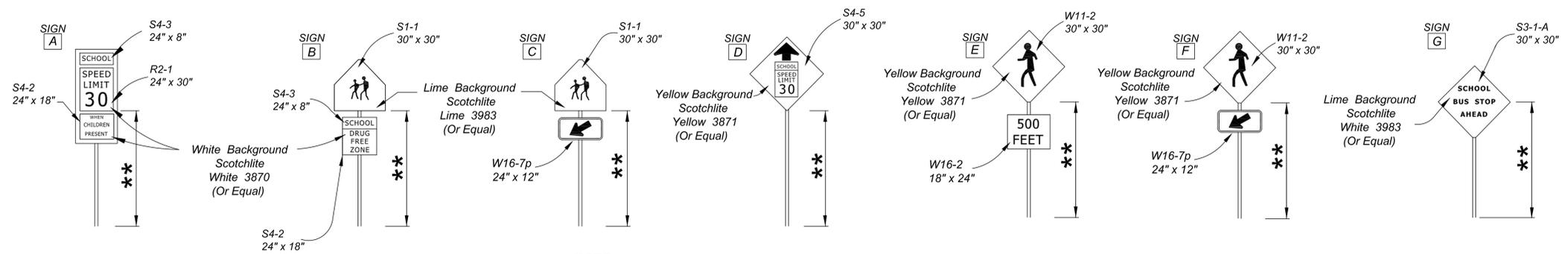
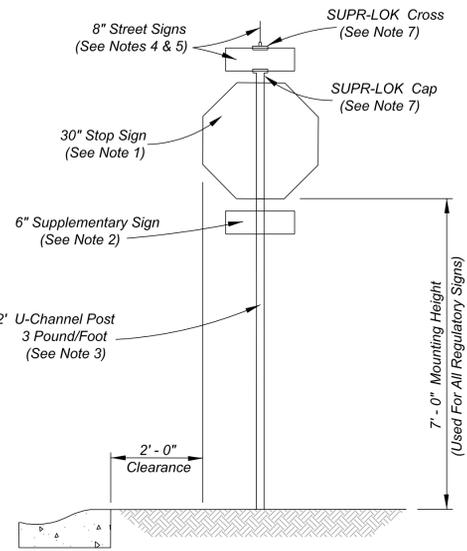
- 1.) The "No Parking Fire Lane" Message Shall Be Six (6) Feet In Depth From Edge Of Pavement Or Curb.
- 2.) The Letters Shall Be Two (2) Feet In Height And A Minimum Of Four (4) Inches Wide.
- 3.) A "No Parking Fire Lane" Sign Shall Be Placed Every Thirty (30) Feet And Comply With Standard Sign Detail On This Sheet. Fire Apparatus Access Roads Up To 26 Feet Wide Shall Be Posted With Signs On Both Sides As A Fire Lane. Fire Apparatus Access Roads Greater Than 26 Feet Wide Shall Be Posted With Signs On One Side As A Fire Lane.
- 4.) The Striping Shall Be A Minimum Of Four (4) Inches Wide At A Forty-Five (45) Degree Angle And Five (5) Feet On Center.
- 5.) All Pavement Markings Shall Be Painted Traffic Yellow. Curb Adjacent To Fire Lanes Shall Be Painted Safety Yellow Along The Entire Length Of The Fire Lane. Curb Adjacent To Hydrants Or FDC's Shall Be Painted Safety Red.
- 6.) Pavement Adjacent To Fire Protection Equipment, Including FDC, Fire Protection Control Valve, And Fire Hydrants Shall Be Marked In Accordance With This Detail. A "No Parking Fire Lane" Sign Shall Be Placed Every 30 Feet In These Zones And Comply With The Standard Sign Details On This Sheet.

Rev. No.	Description	Date
1	Entire Set	07/26/2011
2	Revised Storz Details	01/10/2014



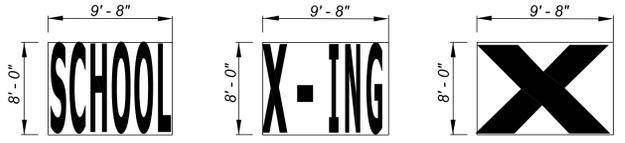
CITY OF SHELBYVILLE
**FIRE DEPT. AND WATER
STANDARD DETAILS**

SHEET
15
OF
18



NOTE:
 ** 7'-0" Mounting Height From Bottom Of Sign To Roadway Edge Of Pavement. (Typical)
 All Black Lettering Is To Be Scotchlite 7720 (Or Equal)

REGULATORY / WARNING SIGN DETAILS
 Scale: None



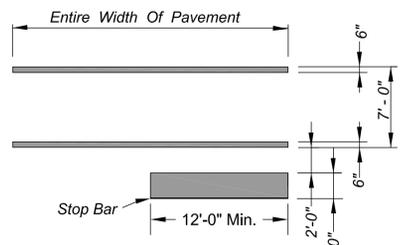
PAVEMENT MARKING DETAIL
 Scale: None

GENERAL NOTES:

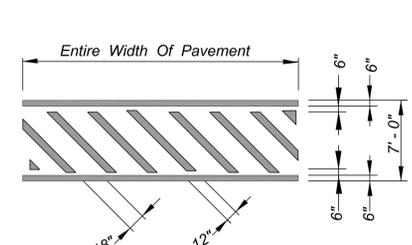
- 1.) All Regulatory Signs Shall Be High Intensity And In Accordance With The Indiana Manual On Uniform Traffic Control Devices, Most Recent Edition.
- 2.) Signs S3-1-A, W14-1 & W14-2 To Be Installed When Required By The City Of Shelbyville.
- 3.) All Pavement Markings Shown In These Details, Except For Double Yellow Lines And Edge Lines, Shall Span Across Approach Lanes.
- 4.) Where Pedestrian Cross Traffic Is Not Established, School Crossing Pavement Markings And Sign C May Be Omitted At The Discretion Of The City Of Shelbyville.
- 5.) All Pavement Markings On Asphalt Pavement Shall Be Thermo Plastic. All Pavement Markings On Concrete Pavement Shall Be Epoxy.

TYPICAL REGULATORY / WARNING AND STREET SIGN REQUIREMENTS:

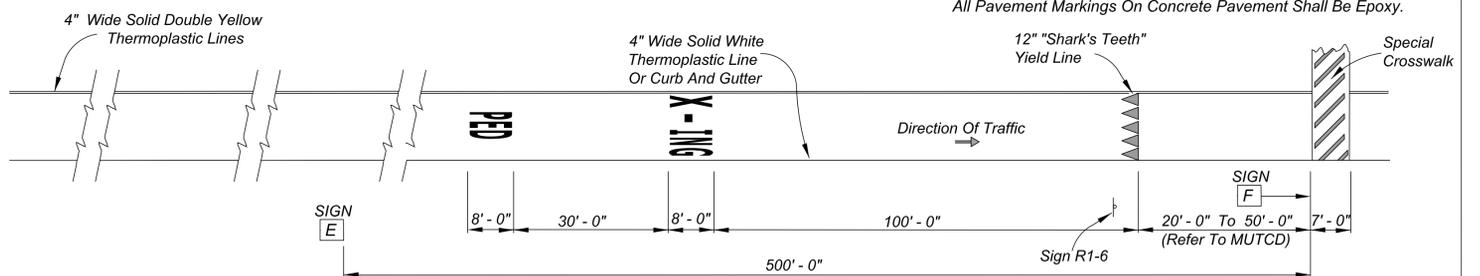
- 1.) Stop Sign Shall Be High Intensity And In Accordance With Most Recent Indiana Manual On Uniform Traffic Control Devices. Unless Otherwise Detailed On This Sheet, Other Regulatory Signs Shall Be Of The Design, Size, And Construction As Specified In Said Manual. All Signs Shall Be Tagged On The Rear Of The Sign With An Adhesive Label With The Month And Year That The Signs Were Installed.
- 2.) An All Way Stop Intersection Requires An "ALL WAY" Supplementary Sign 18" Wide By 6" Tall In Accordance With Said Manual. A Two Way Stop Controlled Intersection Requires A "CROSS TRAFFIC DOES NOT STOP" Supplementary Sign Of The Same Size And In Accordance With Said Manual.
- 3.) All Regulatory/Warning Signs, Other Than Stop Signs, With Panels Less Than Or Equal To 48" x 30" In Size Shall Be Mounted On 12' U-Channel Posts (3 pounds/foot). All U-Channel Posts Shall Be Painted Green. Regardless If Material For Posts Is Other Than As Shown Herein, Mounting Height Shall Be 7' - 0".
- 4.) Streets Shall Be Signed At Non-Signalized Intersections With Two Such Street Sign Assemblies. Separate 12' U-Channel Post (3 pounds/foot) For Street Signs Permitted Only At Signalized Intersections.
- 5.) Street Signs Shall Be 8" Tall Extruded Aluminum (6063-T6) Reflective Green Background With 6" Tall Reflective White Letters. Street Signs Shall Have Rounded Corners.
- 6.) Refer To INDOT Standard Drawings E 802-SNGS-09 And E802-SNGS-10 For Post Standards And For The Mounting Of Sign Panels Larger Than 48" x 30".
- 7.) SUPR-LOK Cross Shall Be Model #990X. SUPR-LOK Cap Shall Be Model #91UX-NU180.
- 8.) Signs With Panel Widths Greater Than 36" Shall Be Reinforced On The Back Side Of The Panel By An Approved Method.
- 9.) Alternate Custom Posts May Be Used Upon Receiving Expressed Written Permission From The City Of Shelbyville. Custom Posts Shall Be The Financial Responsibility Of Subdivision's Homeowner's Association. In The Event That The City Of Shelbyville Must Replace Custom Sign Posts, The City Reserves The Right To Install Its Standard Steel Post.
- 10.) All Required Traffic Control (Signs And Markings) Shall Be In Place Prior To The Release Of The First Occupancy Permit.



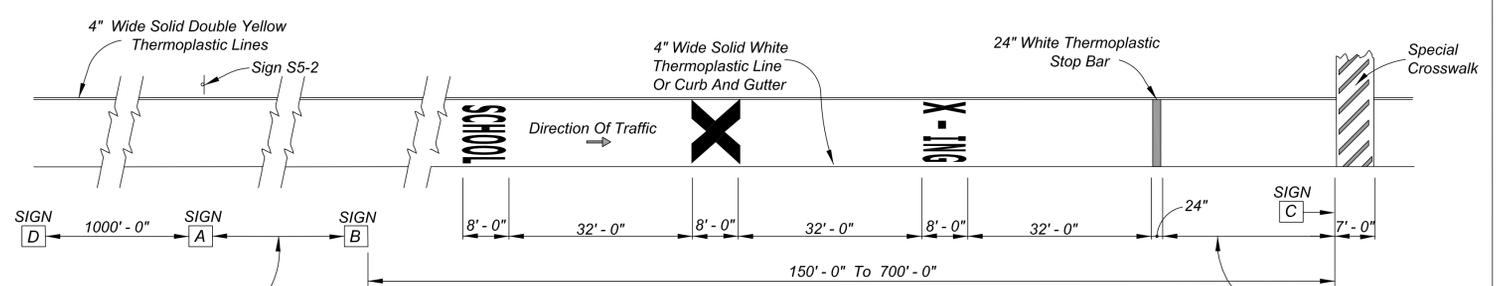
INTERSECTION CROSSWALK DETAIL
 Scale: None



SPECIAL CROSSWALK DETAIL
 Scale: None



PEDESTRIAN CROSSING APPROACH DETAIL - SINGLE LANE
 Scale: None



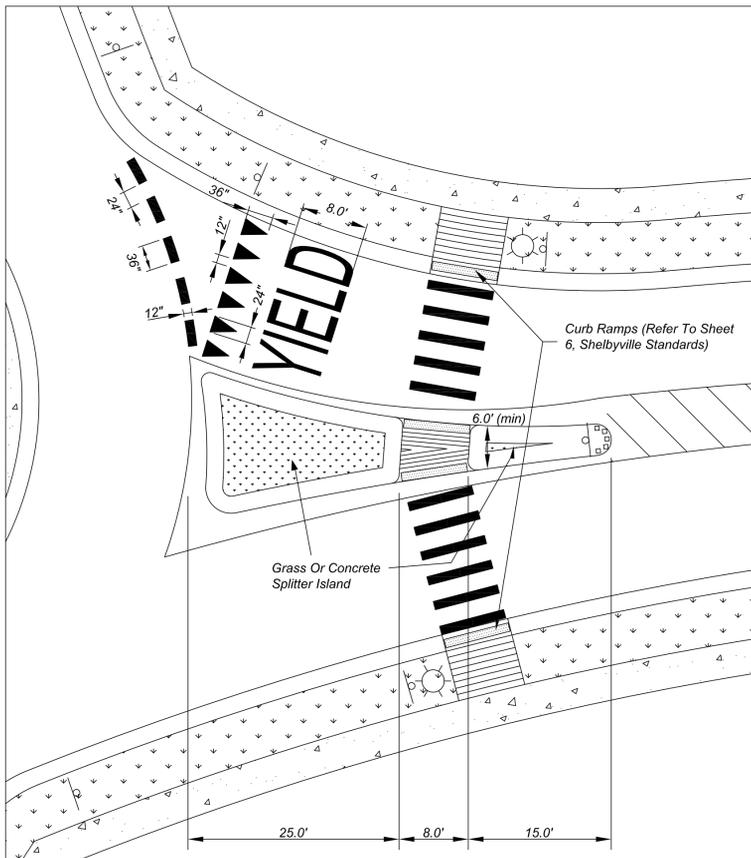
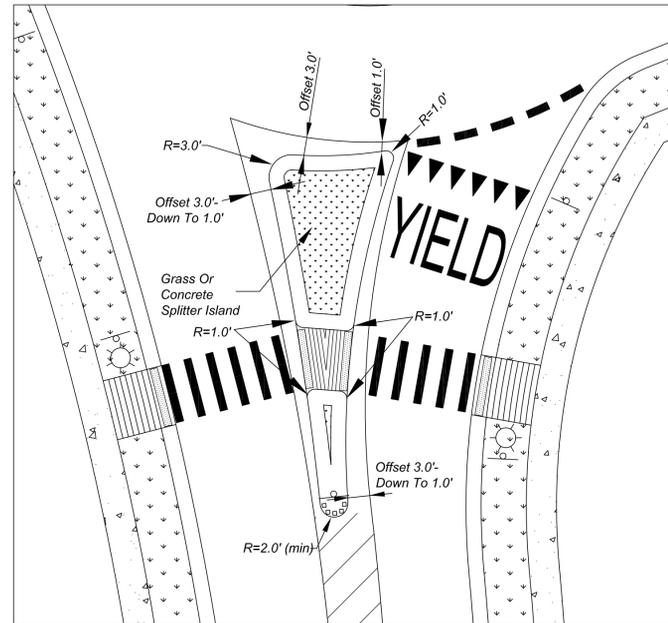
SCHOOL ZONE APPROACH DETAIL - SINGLE LANE
 Scale: None

Rev. No.	Description	Date
1	Entire Set	07/26/2011
2	Removed Monument Detail	01/10/2014

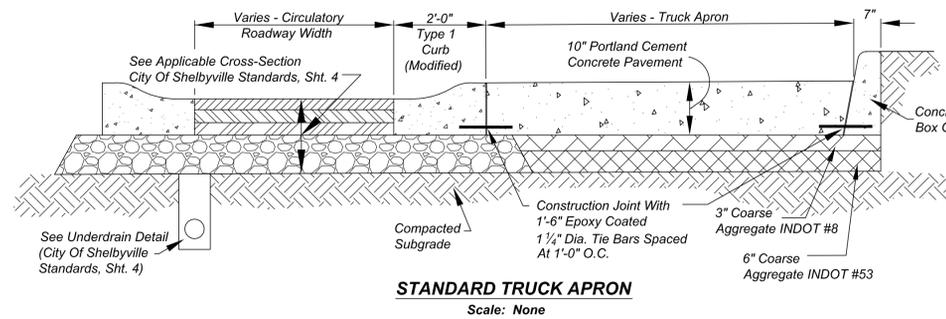


CITY OF SHELBYVILLE
SIGNS, MARKINGS, AND MONUMENTATION DETAILS

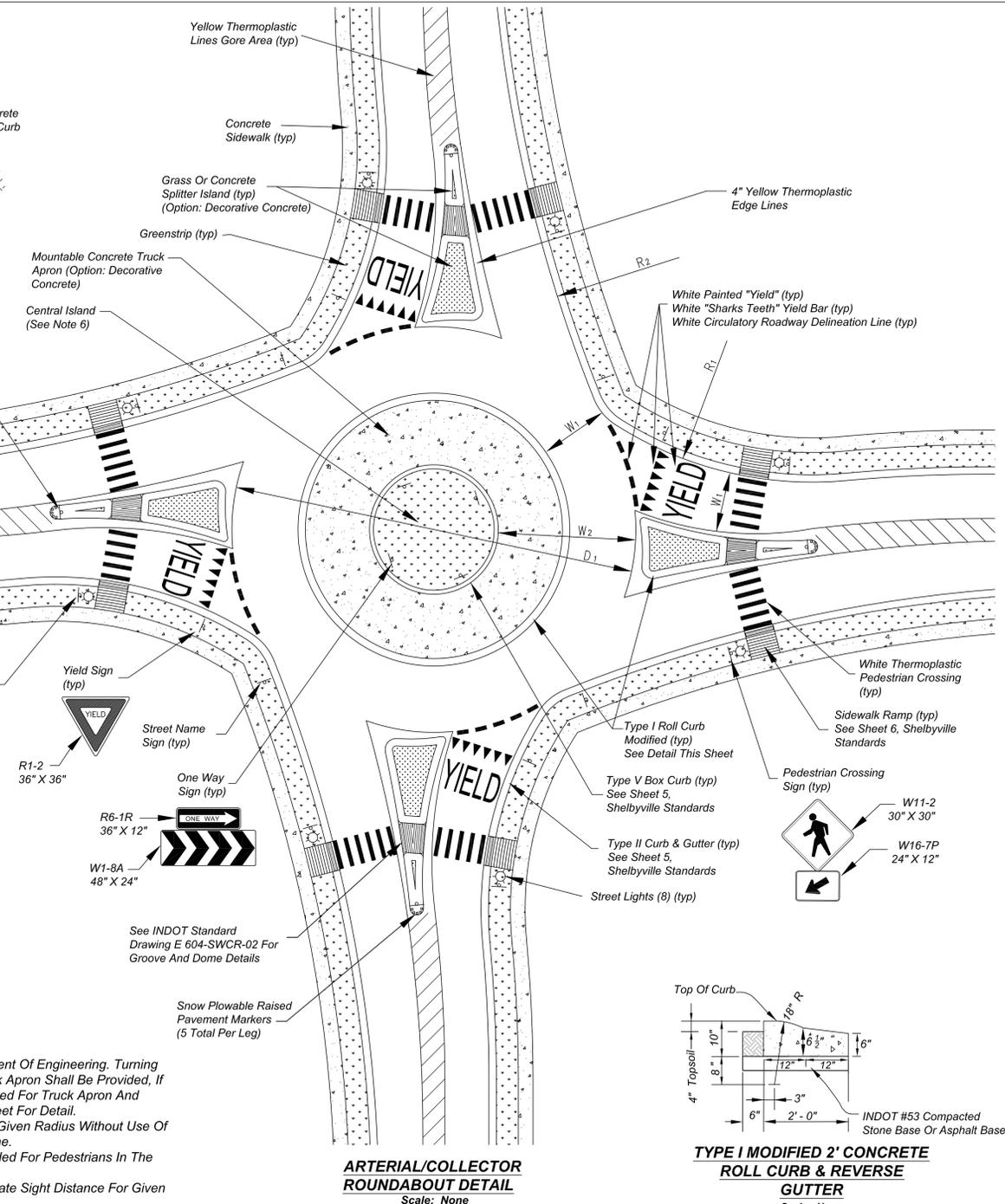
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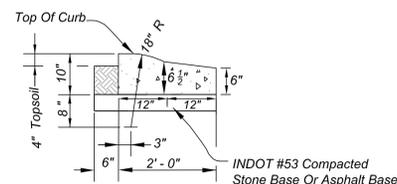
SPLITTER ISLAND AND APPROACH DETAILS
Scale: None



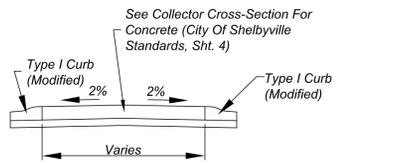
STANDARD TRUCK APRON
Scale: None



ARTERIAL/COLLECTOR ROUNDABOUT DETAIL
Scale: None



TYPE I MODIFIED 2' CONCRETE ROLL CURB & REVERSE GUTTER
Scale: None



TYPICAL SPLITTER ISLAND CROSS-SECTION DETAIL
Scale: None

ARTERIAL/COLLECTOR ROUNDABOUT NOTES

- This Sheet Applies To Single Lane Arterial/Collector Roundabouts.
- Design Elements:
 - D1: Inscribed Circle Diameter = 110' (minimum)
 - R1: Entry Radius
 - R2: Exit Radius
 - W1: Entry Width And Circular Traveled Way = Wheelpath Of S-BUS 36 = 16.5' min, 20' max.
 - W2: Traveled Way Plus Truck Apron = Wheelpath Of WB-67
- Design Vehicle Shall Be S-BUS 36 And WB-67 Truck, W1 And W2 Respectively Unless Otherwise Approved By The Department Of Engineering. Turning Templates Shall Be Depicted On The Drawing To Verify Satisfaction Of Design Vehicle Criterion. A Mountable Concrete Truck Apron Shall Be Provided, If Necessary. Truck Apron And Concrete Splitter Islands Shall Be Doweled Into Adjacent Curb. Decorative Concrete May Be Used For Truck Apron And Concrete Splitter Islands. Color And Patterns Shall Be Subject To Engineering And Plan Commission Approval. See This Sheet For Detail.
- The Width Of Roundabout Traveling Lane, W1, Shall Be Dependent On Width Required For Passage By A S-BUS 36, At The Given Radius Without Use Of Truck Apron. This Width Shall Be A Minimum Of 16.5'. Entry Width Shall Be The Same As The Width Of Circular Traveling Lane.
- Cross Walk Shall Be Located 25' From The Inscribed Circle. A 6' Wide Refuge Area, Measured At Its Midpoint, Shall Be Provided For Pedestrians In The Splitter Island. No Pedestrian Crossings Shall Be Allowed Into The Roundabout Central Island.
- Any Landscaping Or Objects Located In The Middle Of The Central Island Shall Be Less Than 24" In Height, Provide Appropriate Sight Distance For Given Approaching Roadway Design Speed, And Be Approved By The Department Of Engineering.
- All Signage And Pavement Markings Shown Shall Be Used As Minimums. Multi-Lane Roundabouts Shall Use "Fish-Hook" Markings At Entries, To Delineate Lane Usage As Well As Advance Signage For Driver Instruction. All Signage And Pavement Markings Shall Be In Accordance With The Most Recent Version Of The Indiana MUTCD And Are Subject To Approval By The Department Of Engineering.
- Use Of "Radial Design" For Roundabout Is Discouraged. Off-Set Right Design Is Not Acceptable.
- No Drainage Structures Shall Be Located Within Circumference Of Inscribed Circle Of Single-Lane Roundabouts.
- All Pavement Markings Shall Be Thermoplastic.
- Snowplowable Raised Pavement Markers (RPM) Shall Be Placed At Each Gore Area Entering The Roundabout, Prior To Pedestrian Crossings In A V-Shaped Pattern. One RPM Shall Be Placed At The Point Of The Gore Area, With Two More Placed On Either Side Of The Perimeter Of The Gore Area At Equal Distances Up To The Crossing Location, For A Total Of Five (5) RPM's.
- All Signs Shall Be High Intensity, High Reflectivity And In Accordance With The Most Recent INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. See This Sheet For Sign Codes And Sizes.
- For Cross-Sections For Which Curb Is Poured On Asphalt, Asphalt Is To Be Paved Through Entire Splitter Island.
- All Other Appropriate City Of Shelbyville Standards Apply.
- Street Lighting Is Required On The Approach Side Of All Pedestrian Crossings At The Roundabout Intersection.
- All Roundabout Designs Must Be Approved By The Departments Of Engineering And Plan Commission.

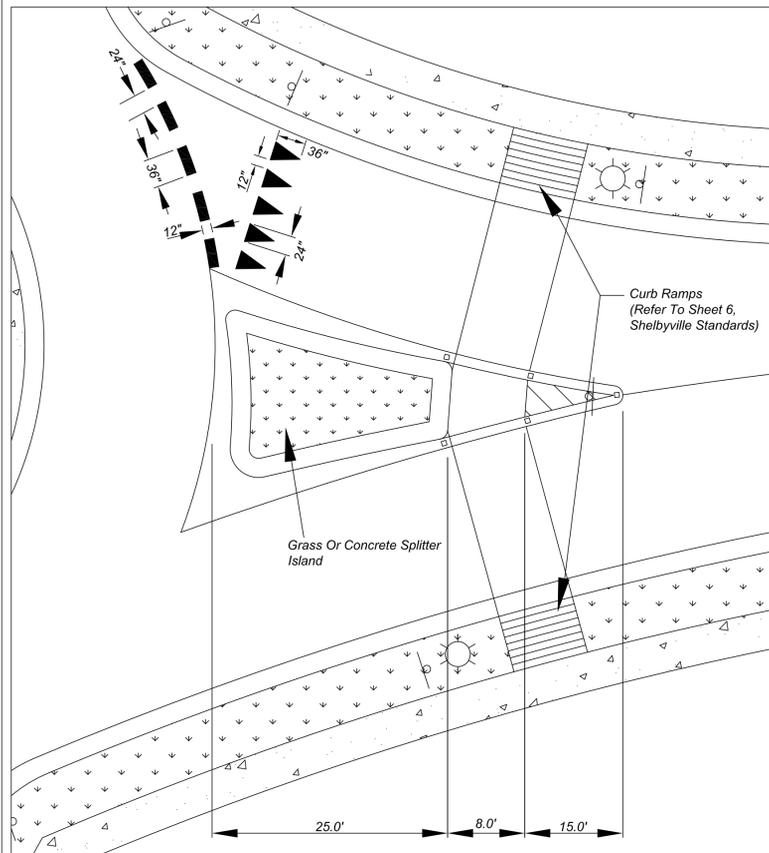
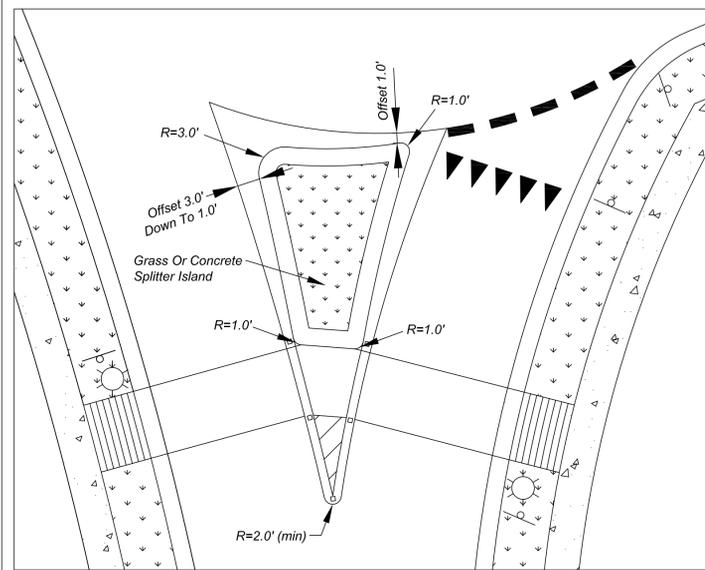
NOTICE:
CERTIFICATION IS LIMITED TO THOSE STANDARDS AND GUIDELINES PER THIS SHEET. CONSTRUCTION IS SUBJECT TO CONSTRUCTION DRAWINGS, SHOP DRAWINGS, AND DESIGN ENGINEER'S CERTIFICATION SHEET.

Rev. No.	REVISIONS Description	Date
1	Entire Set	07/26/2011
2	Reformatted Sheet	01/10/2014

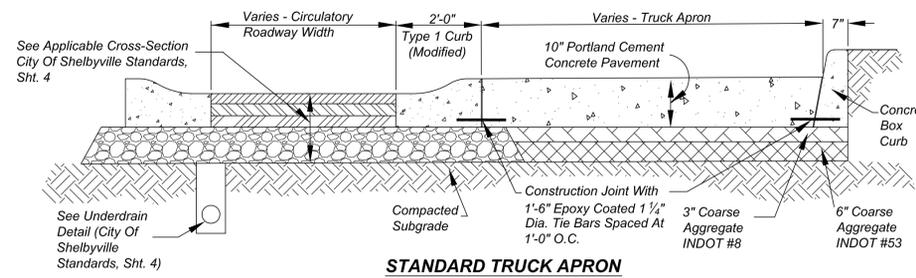


CITY OF SHELBYVILLE
ARTERIAL/COLLECTOR ROUNDABOUT STANDARDS & DETAILS

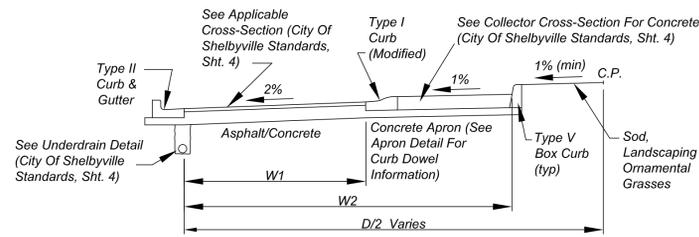
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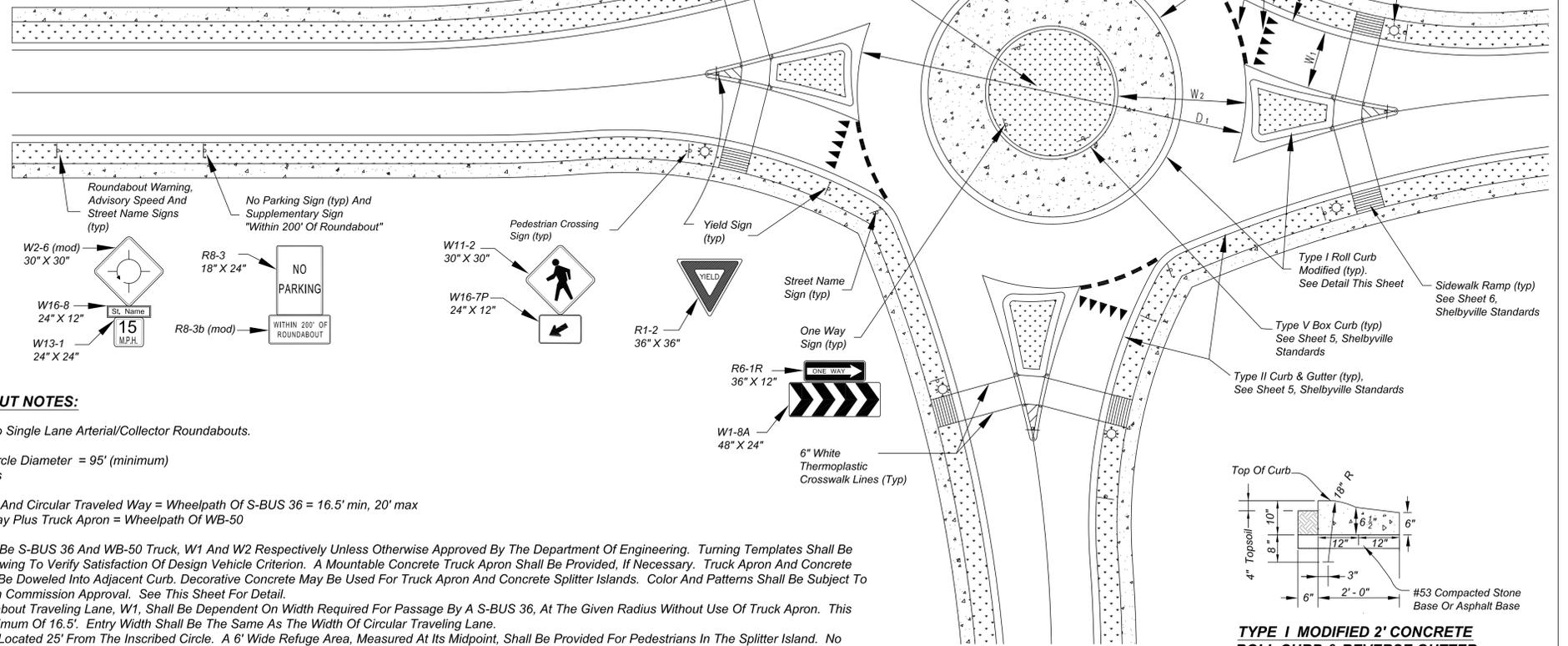
SPLITTER ISLAND AND APPROACH DETAILS
Scale: None



STANDARD TRUCK APRON
Scale: None



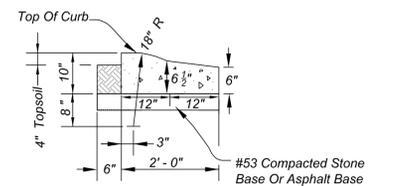
LOCAL SINGLE LANE ROUNDABOUT CROSS SECTION
Scale: None



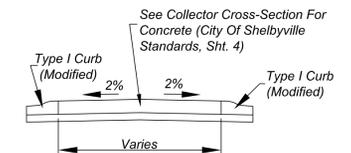
LOCAL ROUNDABOUT DETAIL
Scale: None

LOCAL ROUNDABOUT NOTES:

- This Sheet Applies To Single Lane Arterial/Collector Roundabouts.
- Design Elements:
 - D1: Inscribed Circle Diameter = 95' (minimum)
 - R1: Entry Radius
 - R2: Exit Radius
 - W1: Entry Width And Circular Traveled Way = Wheelpath Of S-BUS 36 = 16.5' min, 20' max
 - W2: Traveled Way Plus Truck Apron = Wheelpath Of WB-50
- Design Vehicle Shall Be S-BUS 36 And WB-50 Truck, W1 And W2 Respectively Unless Otherwise Approved By The Department Of Engineering. Turning Templates Shall Be Depicted On The Drawing To Verify Satisfaction Of Design Vehicle Criterion. A Mountable Concrete Truck Apron Shall Be Provided, If Necessary. Truck Apron And Concrete Splitter Islands Shall Be Doweled Into Adjacent Curb. Decorative Concrete May Be Used For Truck Apron And Concrete Splitter Islands. Color And Patterns Shall Be Subject To Engineering And Plan Commission Approval. See This Sheet For Detail.
- The Width Of Roundabout Traveling Lane, W1, Shall Be Dependent On Width Required For Passage By A S-BUS 36, At The Given Radius Without Use Of Truck Apron. This Width Shall Be A Minimum Of 16.5'. Entry Width Shall Be The Same As The Width Of Circular Traveling Lane.
- Cross Walk Shall Be Located 25' From The Inscribed Circle. A 6' Wide Refuge Area, Measured At Its Midpoint, Shall Be Provided For Pedestrians In The Splitter Island. No Pedestrian Crossings Shall Be Allowed Into The Roundabout Central Island.
- Any Landscaping Or Objects Located In The Middle Of The Central Island Shall Be Less Than 24" In Height, Provide Appropriate Sight Distance For Given Approaching Roadway Design Speed, And Be Approved By The Department Of Engineering.
- All Signage And Pavement Markings Shown Shall Be Used As Minimum Control. All Signage And Pavement Markings Shall Be In Accordance With The Most Recent Version Of The Indiana MUTCD And Are Subject To Approval By The Department Of Engineering.
- Use Of "Radial Design" For Roundabout Is Discouraged. Off-Set Right Design Is Not Acceptable.
- No Drainage Structures Shall Be Located Within Circumference Of Inscribed Circle Of Single-Lane Roundabouts.
- All Pavement Markings Shall Be Thermoplastic.
- Snowplowable Raised Pavement Markers (RPM) Shall Be Placed At Each Gore Area Entering The Roundabout, Prior To Pedestrian Crossings In A V-Shaped Pattern. One RPM Shall Be Placed At The Point Of The Gore Area, With Two More Placed On Either Side Of The Perimeter Of The Gore Area At Equal Distances Up To The Crossing Location, For A Total Of Five (5) RPM's.
- All Signs Shall Be High Intensity, High Reflectivity And In Accordance With The Most Recent INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. See This Sheet For Sign Codes And Sizes.
- All Other Appropriate City Of Shelbyville Standards Apply.
- Street Lighting Is Required On The Approach Side Of All Pedestrian Crossings At The Roundabout Intersection.
- All Roundabout Designs Must Be Approved By The Departments Of Engineering And Plan Commission.



TYPE I MODIFIED 2' CONCRETE ROLL CURB & REVERSE GUTTER
Scale: None



TYPICAL SPLITTER ISLAND CROSS-SECTION DETAIL
Scale: None

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LOCAL ROUNDABOUT STANDARDS & DETAILS

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