THE CITY OF MIDDLETON

Supplement to the
Idaho Standards for Public Works Construction

MIDDLETON
CONNECTS

ART
HISTORY
PARKS
PATHWAYS &
TECHNOLOGY

PROFESSIONAL ENGINEER
REGISTERED
10207
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STATE OF IDAHO
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INTRODUCTION

The City of Middleton has adopted the most current edition of the Idaho Standards for Public Works Construction (ISPWC). Prior to any work or construction being accepted by the City for use by the public, the work must be completed in conformance with the ISPWC. The City has also developed construction standards in conjunction with the current edition of the ISPWC.

City standards include acceptable materials, construction practices, and other specific requirements which may not be covered under the ISPWC standards or may be supplemental to the ISPWC.

The intent of the Middleton Supplement to the ISPWC is not to conflict with the ISPWC but rather to supplement and specify construction methods, materials, sizes, and practices specific to the City of Middleton.

WATER

1. General:

All materials, construction, testing, and inspection shall be in accordance with the current ISPWC. Final construction plans and specifications shall be submitted to the City for review and approval prior to construction.

2. Fire Flow requirements:

The water distribution system is required to draft the following minimum fire flows for new development in the City:

Residential zones	1500 gpm[1] for 2 hour duration
Other zones	Determined on an individual basis per International Fire Code

The City Engineer shall review the existing water system, operations and conditions, review the layout of the water infrastructure proposed for the development, and then make recommendations to the City as to the water main line size (minimum 8-inches), any additional water source needed, and/or water storage requirements.

3. Fire Hydrants:

A. Spacing:

1. Hydrant spacing shall be a maximum of 600 feet in the residential zone, and shall be reviewed and approved by City staff and Middleton Rural Fire District.
2. Hydrant spacing in zones other than residential shall be determined on a case by case basis.
3. All water mains installed on cul-de-sacs or similar dead end streets shall have a hydrant located at the end of the water line;

B. Materials:

1. Fire hydrants shall be Mueller Centurion, no exception, and painted with two coats of fire safety color red hydrant enamel.
2. Flushing hydrants or blow-offs shall be 4" if permanent, 2" if temporary and

[1] 58.01.08 Idaho Rules for Public Drinking Water Systems
552.01.b.i. Any public water system shall be capable of providing sufficient water during maximum day demand conditions, including fire flow where provided, to maintain a minimum pressure of twenty (20) psi throughout the distribution system, at ground level, as measured at the service connection or along the property line adjacent to the consumer's premises.

manufactured by Kupferle or equivalent per ISPWC SD-405 and approved by the City.

4. Water Pipe, Fittings and Valves:

A. Materials: All Water Pipe, Fittings, and Valves shall be in accordance with current edition of the ISPWC. Water pipe, fittings and valves shall meet the following:

1. Water Pipe:

a. Class 52 cement-lined ductile iron pipe meeting ANSI/AWWA C151 for diameters of 6" to 64";

b. AWWA C900 - 07 PVC DR 18 pipe for diameters up to 12";

c. AWWA C909 – 07 PVC DR 18 for diameters larger than 12".

2. Fittings: ductile iron compact fitting ANSI/AWWA C153.

3. Valves:

a. Ductile iron flanged valves ANSI/AWWA C509 or C515.

b. Tracer wire at all valves shall be located on the outside of the valve box and pass between the valve box and the slip top. The wire is not allowed to come into the valve box from the bottom. The Developer shall test for continuity after installation. Test to be observed by the City.

c. Domestic manufactured valves are required to be installed unless otherwise specifically approved by the City. Water valves manufactured by Clow are not acceptable for installation in the City's water system.

d. Valves that are connected to the City main lines become City property. Valves shall only be operated by City personnel, per City code.

B. Testing***:*** The Developer shall test water mains for pressure and absence of bacteria prior to permitting the water mains to be open to the City distribution system. City personnel shall be present during all water main testing. Failure to have City personnel present for testing is sufficient reason for requirement to re-test. Developer's engineer shall coordinate and observe testing and provide

certification of testing and testing results to the City.

1. Pressure Testing**:** Water mains shall be pressure tested according to the specifications set forth in the current edition of the ISPWC. Exceptions to the ISPWC are as follows:
   - If pressure during testing drops five (5) psi or more, the test is considered to have failed even if leakage is below allowable.
   - All valves shall be exposed prior to any testing and verified by the City to be open or closed.
   - The results of the test reported to the City is gallons of leakage.
2. Trench Compaction Testing*:* Developer shall test trench compaction and testing shall be by an independent materials testing laboratory, once every 300 feet of trench with a minimum of two test locations.
3. Each hydrant shall be sampled for absence of bacteria or as otherwise approved by the City.

C. Location*:* All water line locations will be approved by the City. In cases where water pipe crosses a non-potable water line, IDAPA 58.01.08.542.07 shall be strictly observed.

D. Size**:** Water main sizes shall be the following except when otherwise recommended by the City Engineer for fire flows or other system conditions.

1. Minimum size is 8" in diameter.
2. 12" diameter lines shall be placed when water mains are placed on or adjacent to section lines roads or quarter section line roads or as required in the Facility Plan.

E. Valve configuration shall be as follows:

1. Tees shall have a valve on each branch.
2. Crosses shall have valves on all legs.

F. Cover**:** Water mains shall have a minimum of 42" cover and a maximum cover of 60". Cover greater than 60" may be allowed where obstructions occur, but must be specifically approved by the City.

G. Dead-end Water Mains:

1. Dead end mains are to be avoided whenever possible and only permitted

when phased development is approved.

2. Dead-end water mains to be extended shall terminate with a valve followed by at least 10 feet of water line with an end cap and thrust block.

3. Dead end water mains shall have a fire hydrant or blow off within 10 feet of the termination of the main unless otherwise permitted by the City.

H. Contractors working in the City are not to open, close, or tamper with any valve per City code. The contractor shall notify the City when a valve needs to be opened or closed.

5. Water Services:

A. Service Lines**:** Service lines may be polyethylene (SDR9 copper tube size (cts) or Class K copper pipe from water meter to water main with minimum three-quarter inch (3/4") diameter for single service and a minimum of one and one half inch (1 ½") diameter for double services. No splices in service line.

B. Fittings: All fittings, connections, compression connections, bushings, adapters, setters and any miscellaneous materials are to be manufactured by Mueller or Ford. Galvanized or yellow brass fittings are prohibited.

C. Double Water Meter Branch: The double water meter branch connection shall be used for double services. The double water meter branch shall be a compression fitting (to service line) by MIP (male iron pipe).

D. Service Saddle**:** Saddles for water mains shall be ROMAC (single stainless steel strap) for water main less than 12" in diameter OR ROMAC (double stainless steel strap) for water main greater than or equal to 12" diameter. Saddle shall be FIP (female iron pipe) thread connection.

E. Corporation Stop**:** Corporation stops shall be three-quarter inch (3/4") for a single service line and one and one-half inch (1 ½") for a double service line. Corporation stop is required at all main-line connections. Corporation stop shall be set so the valve is accessible from the side. Corporation stop shall be MIP (to saddle) by compression connection (to service line).

F. Curb Stop: Curb stops shall be ball valve type or City approved equivalent. Curb stop shall be FIP by FIP. A curb stop is required at the base of the meter setter on the water main side.

G. Meter Setter Connection: Meter setter connection shall be multi-purpose thread (to meter yoke) by MIP.

H. Meter Setter: Meter setters shall be an 18" minimum Mueller #B-2404-2, three-quarter inch by three-quarter inch (3/4" x 3/4") and have a dual vertical check valve. Connections shall be multi-purpose thread. Meter setter shall be centered in the meter vault.

I. Customer Connection: A meter setter connection (multi-purpose thread by compression connection) and a five (5) foot section of service line pipe shall be extended on the customer side of the meter vault with a temporary plug. A water-tight plug is required in high ground water areas.

J. Meter Vaults: Single Meters: Meter vaults shall be made of 18" smooth interior corrugated HDPE pipe, ADS N-12. Meter vault lids shall be Tyler type 6150 with single knockouts in place.

K. Meter Vaults: Double Meters: Meter vaults shall be made of 24" smooth interior corrugated HDPE pipe, ADS N-12. Meter vault lids shall be Tyler type 6150 with single knockouts in place.

L. Location: Water services shall be located outside of right of way with the center of the can approximately 24 inches behind the back of sidewalk unless otherwise approved by the City. The elevation of the meter lid shall be 0.2 ft above back of sidewalk.

M. The developer or property owner shall provide and install all materials for water services except the water meter. Water meter will be provided and installed by the City.

SANITARY SEWER:

1. General:

All materials, construction, testing, and inspection shall be in accordance to the current edition of the ISPWC.

2. Sanitary Sewer Pipe:

A. Materials: Sewer pipe shall be ASTM 3034 SDR 35 PVC pipe or City approved equivalent. Trench backfill shall be Type A backfill according to the

specifications set forth in the current edition of the ISPWC.

B. Testing: Sanitary Sewer Mains shall be pressure tested and grade tested by the Developer prior to the sewer main being accepted by the City. City personnel shall be present during sewer main testing. Failure to have City personnel present during all testing is sufficient reason for requirement to retest. Developer's engineer shall provide certification of testing and testing results to the City.

1. Pressure Testing: Sanitary Sewer mains shall be pressure tested according to the specifications set forth in the current edition of the ISPWC.

2. Visual Test: The Developer shall provide CCTV (closed caption television) of all sections of sewer mains to the City. All visible leaks shall be repaired, even if the leakage may be below allowable limits. All repairs shall be made and shall be inspected by the City prior to backfilling. In no case shall pavement be placed without the CCTV approved by the City.

3. Standing Water: If standing water is observed due to grade defects, the following table shows the allowable standing water depth in relationship to slope of the pipe.

Pipe Slope (ft/ft)	Allowable Standing Water Depth (in)
$G < 0.001$	$\leq 5/8$
$0.001 \leq G < 0.003$	$\leq 1/2$
$0.003 \leq G < 0.005$	$\leq 3/8$
$0.005 \leq G < 0.007$	$\leq 1/4$
$0.007 \leq G < 0.009$	$\leq 1/8$
$G > 0.009$	No standing water

4. Trench Compaction Testing: Trench compaction testing by the Developer shall be by an independent testing laboratory and once every 300 feet, with a minimum of two test locations. Testing and retesting shall be in accordance with the specifications set forth in the current edition of the ISPWC.

3. <u>Manholes</u>

A. Testing*:* The Developer shall test sanitary sewer manholes prior to the sewer

manhole being accepted into the collection system. Testing shall be in accordance to current edition of the ISPWC. City personnel shall be present during testing. Failure to have City personnel present during all testing is sufficient reason for requirement to retest. Developer's engineer shall provide certification of testing and testing results to the City.

B. Grade rings: In conformance with ISPWC. The grade rings shall not exceed 12 inches in height. "Whirligig" is acceptable for installation.

C. Manholes 20 feet deep or greater shall be 60 inch with 30 inch ring and cover..

D. Drop manholes not allowed except in special circumstances where other sewer options are not workable.

E. External sealing system: All manholes shall be water tight. An external sealing system shall be required to be installed on the outside of the manhole at the barrel joints in addition to the joint sealing system specified in the current edition of the ISPWC. The external sealing system shall be Infi-Shield manufactured by Sealing Systems Inc., EZ Exterior Joint Wrap, or City approved equivalent.

F. Connection into an existing manhole or construction of a drop manhole or special manhole shall not be accepted without full time inspection by City staff or the City Engineer.

G. Manholes to be grouted. Connection of sewer lines to manholes shall be grouted after the vacuum test is successfully completed.

4. <u>Pressure Sewer Pipes:</u>

A. Materials: All pressure sewer pipe shall be in accordance with the current edition of the ISPWC. Pressure sewer pipe shall be the following:

1. Class 52 cement-lined ductile iron pipe with a fused calcium aluminate cement mortar lining (H_2Sewer Safe) as manufactured by Griffin Pipe Products meeting ANSI/AWWA standards.
2. AWWA C900 PVC DR 18 or AWWA C909 PVC DR 18.

B. Testing: Testing by the Developer shall be in accordance to current edition of the ISPWC. Sanitary sewer pressure mains shall be tested prior to such sewer main being accepted by the City. City personnel shall be present during testing. Failure to have City personnel present during all testing is sufficient reason for

requirement to retest. Developer's engineer shall observe testing and provide certification of testing and testing results to the City. Trench compaction testing shall be completed by an independent testing laboratory and once every 300 feet with a minimum of two test locations.

C. Locating Wire Boxes: Shall be in accordance current edition of the ISPWC. Locating wire boxes shall be installed on pressure sewer mains at a maximum spacing of 1000 feet and/or at every angle.

D. Cover: Pressure sewer mains shall have a minimum of 42" cover and a maximum cover of 60”. Cover greater than 60" may be allowed where obstructions occur, but must be approved by the City.

5. Sewer Services:

A. Connection to Mains: Service wyes or tees shall be used on new main installations. Saddles are not acceptable. All sewer services discharge to the sewer main. If a service is approved to discharge to a manhole, the service flow direction shall be pointed down stream and at an angle of less than 45 degrees to the direction of flow. Inserta-tee are allowable only in cases specifically and individually approved by Public Works.

B. Service lines shall be installed at least 6 feet apart at the main and at least 6 feet from a manhole.

C. Sewer service installations per SD-511 Type C are not allowed unless specifically approved by the City.

D. Service Markers**:** In addition to requirements set forth in the current edition of the ISPWC, sewer services shall also be marked with a 3” permanent wet set stamp in the concrete sidewalk.

6. Septic Tanks

Installations and properties that utilize individual, on site septic systems for sewer service are required to have the septic tank pumped every six (6) years minimum. Evidence of septic tank pumping to be provided to the City.

7. Sewer Lift Stations:

Standard Specifications and Drawings: See "City of Middleton, Idaho Sanitary Sewer Lift Station Standards" in Appendix A.

STORM WATER MANAGEMENT

1. General:

All materials, construction, testing, and inspection shall be in accordance to the current edition of the ISPWC. A plan for stormwater management must be approved by the City. All stormwater is to be treated and managed on-site. In certain, site specific cases, the City may approve discharge into canals or drains (or other) at pre-development levels. If storm water is to be discharged off site, it must be treated to quality and standards identified prior to project development, and as required by the jurisdiction of the receiving water. Permission from the jurisdiction receiving the treated pre-development flow must be documented and any required permits must be in place (National Pollutant Discharge Elimination System (NPDES), license agreement, or other) prior to City approval. Reviewand approval of offsite storm water discharge at pre-development flow rate will be made on a case-by-case basis. Illicit discharge of storm water is prohibited by the City and the Environmental Protection Agency (EPA).

2. Best Management Practices:

All developments shall use the appropriate "Best Management Practice" (BMP) mitigation measures as defined in the "Catalog of Storm Water Best Management Practices for Idaho Cities and Counties" by Idaho Division of Environmental Quality (IDEQ). Design and construction of BMP and other means of water quality improvements must meet all requirements of the storm water discharge permit for the development (if any) and must be approved by the City Engineer.

3. Collection Piping and Catch Basins:

A. Materials: All storm sewer pipe and catch basins shall be in accordance with current edition of the ISPWC. Storm sewer pipe and catch basins shall be City approved equivalent or the following:

1. All storm drainage pipe shall be ASTM 3034 SDR 35 PVC pipe.
2. ADS N-12 by Hancor, or equivalent may be approved by the City.
3. Trench shall include nonmetallic tape identifying the storm sewer pipe.
4. Minimum size of storm drain pipe shall be 12-inches.

5. Catch basins shall be Type IV for rolled curb and Type 1 for vertical curb. Catch basins shall have a one (1) foot sump.

B. Testing***:*** The Developer shall test the storm sewer system prior to acceptance by the City. City personnel shall be present during storm sewer main testing. Failure to have City personnel present during all testing is sufficient reason for requirement to retest. Developer's engineer shall provide certification of testing and testing results to the City. Testing shall be in accordance with current edition of the ISPWC. Trench compaction testing shall be by an independent testing laboratory and once every 300 feet of trench with a minimum of two test locations.

C. If storm sewer collection pipe discharges into natural drains, sloughs, or canals, the following shall be installed:

1. A corrugated metal pipe shall be placed at the end of the pipe with a minimum of ten feet (10') of bury into the bank.
2. Wingwall or other concrete structure to protect the outfall pipe. To be approved by City Engineer during construction plan review.
3. Riprap of proper size shall be place around the drain pipe. Riprap size shall be approved by City Engineer during construction plan review.
4. A heavy-duty, flap gate valve shall be placed at the end of the discharge pipe. Waterman or City approved equivalent.

D. Stormdrain manhole spacing shall be maximum 400 feet.

E. Retention and detention basins shall be designed according to Best Management Practices and the ISPWC.

F. The storm drain system shall be designed to be free draining. There shall be no standing water in catch basins after construction is complete. All water shall dissipate from detention facilities within 24 hours.

4. <u>Swales</u>: Swales are prohibited.

5. <u>Swale Management</u>

A. When swales are existing in the City, they function as the primary component of the stormwater management and disposal system for the roads in the subdivision. The swales are located in the City of Middleton road right-of-way and are owned by the City of

Middleton, or are in a City of Middleton easement and monitored by the City according to the City's NPDES permit (National Pollutant Discharge Elimination System) by the EPA.

B. The swales are engineered to collect stormwater runoff from the streets, provide filtration and treatment, then hold the water until it dissipates by percolation into the area soils. Each component of the swale is specifically designed to facilitate the treatment and disposal of stormwater. Therefore, preserving swale geometry and constructed components (sandy bottom, etc. for drainage) is a requirement for proper function and maintenance.

C. Homeowners typically enjoy the use of the swale area in front of their homes and like to control its appearance, including ground-cover, frequency of irrigation and mowing, and turf health. For this reason, the City allows homeowners to assume the operation and maintenance of the swale area fronting their properties, provided the swales are appropriately maintained to continue their primary function of stormwater management.

D. The following list of protocols should be observed when maintaining a swale:

1. The sand window in the bottom of the swale should be open and free of grass, weeds, trash, and cobble. The homeowner should rake the sand window at least two (2) times per year to loosen the top sand layer, remove any collected debris, and make sure the sand is in a condition to filter stormwater.

2. If sediment, trash or cobble collects on the sand window, it should be removed by the homeowner as soon as possible.

3. The existing driveway shall not be enlarged or otherwise reduce the footprint of the swale area available for infiltration.

4. The swale should be fully grassed in the side slope area down to, but not over, the sand filter.

5. The grass on side slopes should be irrigated only as needed to preserve the turf health. Overwatering is prohibited.

6. The grass on the side slopes should be mowed at least every two (2) weeks and the grass clippings collected and disposed. Do not mulch the swale side areas.

7. Runoff into the swale from the driveway, excess irrigation water, and water from activities such as car washing, is prohibited.

6. Storm Water Construction Site Discharge Program. In compliance with the City of Middleton Storm Water Management Program requirements, as contained in NPDES Permit No IDS-028100, the City of Middleton will limit and reduce, to the maximum extent practicable, the discharge of pollutants from construction sites in the City of Middleton through its authority to issue building permits, occupancy permits, or otherwise authorize construction. Discharge of storm water into the City MS4 stormwater system is prohibited without specific and written approval by the City

A. Any applicant or application for development in the City of Middleton which will disturb one acre (43,560 square feet) or more of area is required to prepare a Stormwater Pollution Prevention Plan (SWPP) and file a Notice of Intent (NOI) with EPA. Copies of the SWPP and NOI must be furnished to the City prior to any permit approval.

B. Any applicant/application for development in the City of Middleton which disturbs less than one acre or otherwise does not require filing a SWPP and NOI, shall submit to the City an Erosion and Sediment Control (ESC) Plan.

1. The ESC plan must be prepared and signed by a Plan Designer. The plan shall describe the proposed construction activity or land disturbing activity and the proposed BMPs to be employed to prevent and control any impact to storm water quality during and after construction.
2. The ESC plan shall identify BMPs, as applicable to the site, for control of sediment, flow conveyance, tracking, non-stormwater management, waste management, final site stabilization, protection of adjoining property, and maintenance, inspection, and repair of controls. Provisions for material containment and pollution spill prevention must also be included. The ESC plan preparation and elements should follow the industry accepted standards.
3. The ESC plan should be submitted in conjunction with a building permit application, development application, or application to work in the public right of way.

PRESSURIZED IRRIGATION

1. General:

   All materials, construction, testing, and inspection shall be in accordance to the current edition of the ISPWC Divisions. **No cross connection between City water system and pressure irrigation water shall occur.**

2. Irrigation Mains:

   A. Testing**:** The Developer shall test pressure irrigation mains in accordance to current edition of the ISPWC. Trench compaction testing by an independent laboratory shall be once every 300 feet of trench in the rights of way with a minimum of two test locations. Developer's engineer shall provide certification of testing and testing results to the City.

   B. A valve shall be installed adjacent to and outside of the road right of way, each side, where an irrigation line crosses a public street.

3. Irrigation Services:

   A. Valve Box: All irrigation services shall have a fiberglass valve box installed level and straight with the surrounding ground surface.

   B. Irrigation Service: In addition to the valve box, the service shall provide one (1) hose bib for residential irrigation use. Each service line shall be a minimum of one inch (1") in diameter.

   C. Pressure Irrigation Design: All irrigation shares shall be used for the development.

   D. Service Pressure: The design of the irrigation system shall be to provide every residential building lot a service with a minimum pressure of 25 psi.

   E. Service Flow: The design of the irrigation system shall be to provide every lot with a minimum of six gallons per minute (6 gpm) flow. The design can allow for alternating irrigation schedules, (one miners inch = 9 gpm = 1 share.)

   F. City water shall not be used for pressure testing or temporary irrigation.

4. Pressure irrigation pumping station shall have an improved dedicated access to the station.

5. Nuisance Water

With the availability irrigation water, overwatering of landscape is a common problem in the City of Middleton. Irrigation runoff from overwatering flows to the street and into the

stormwater system where it impacts roadway safety, diminished the roadway service life, increases maintenance responsibilities, saturates the system, creates mud and ponding in borrow ditches, swales and low spots, and decreases the capacity and function of the system. Nuisance flows from overwatering are also a source of pollutants to the storm drain system. It is the responsibility of property owners, HOA's and businesses to adjust their water use and irrigation system operations as needed to maintain landscaping, conserve water and PREVENT irrigation water from flowing to the public street and stormwater system.

STREETS

1. General:

   All materials, construction, testing, and inspection shall be in accordance to the current edition of the ISPWC Divisions, City of Middleton Supplemental Construction Standards, and the Highway Standards and Development Procedures for the Association of Canyon County Highway Districts.

2. Rights of Way at Intersections:

   The rights of way at section line and quarter section line road intersections shall be configured to dedicate a triangle of area to be used for intersection control improvements. The triangle shall be formed by measuring from the intersection at the edges of the rights of way, 150 feet along each right of way, then connecting the two points with a line. Please see diagram, Appendix B.

3. Widths:

   A. Rights of Way Widths

      1. All section-line and quarter section-line roads shall be 100 ft (50 ft each side) minimum right of way width.
      2. Roads listed below shall have the following right-of-way widths:

Arterials and Collectors	Half-Road Width	Total Road Width
Emmett Road	50 feet	100 feet
Hartley Lane	50 feet	100 feet
Cemetery Road	50 feet	100 feet
Middleton Road	50 feet	100 feet
Duff Lane	50 feet	100 feet
Lansing Lane	50 feet	100 feet
Kingsbury Road	50 feet	100 feet
Blessinger Road	50 feet	100 feet

Can-Ada Road	50 feet	100 feet
9th Street	50 feet	100 feet
Willis Road	50 feet	100 feet
Meadow Park Street	50 feet	100 feet
Purple Sage Road	50 feet	100 feet
Cornell Street	50 feet	100 feet
River Street	50 feet	100 feet
Landruff Lane	50 feet	100 feet
Canyon Road	50 feet	100 feet
Freezout Road	50 feet	100 feet
El Paso Road	50 feet	100 feet
Lincoln Road	50 feet	100 feet
Peel Street	50 feet	100 feet
KCID Road	50 feet	100 feet
Wood Avenue	50 feet	100 feet
Bass Lane	40 feet	80 feet

The City may approve reduced right-of-way along section and quarter-section line roads if sidewalks are detached and in an easement outside of street right-of-way. All other roads in the City are considered local roads and shall have a half-road right-of-way width of twenty-five (25) feet and a total right-of-way width of fifty (50) feet.

B. Improved Section**:** All improved sections classified as local roads shall have widths from back-of-curb to back-of-curb of thirty-eight (38) feet. Developments that submit improved sections different from the standard may be evaluated and approved on a case-by-case basis

C. The City of Middleton supports street design wherein storm water management and disposal of stormwater utilizes storage and treatment without adversely impacting water quality or water bodies of the United States. The City may allow bioswales or other proven disposal methods that incorporate natural treatment in the construction methods. If an alternative section or stormwater treatment method is to be submitted, the developer shall include a narrative and supporting engineering data that would aid in the review process. Each design submittal will be reviewed based on the specific merits of the design and other factors such as treatment utilized, proximity to water bodies, multi function and use, and comprehensive storm water disposal design.

D. There shall be no new utility poles, transmission structures or substations located within sixty (60) feet of the centerline of section line and quarter section line

roads or within the site triangle unless individually and specifically approved by the City in a license agreement.

4. Private Lane:

A. A private lane may be constructed to access up to three (3) single-family residences. Private lanes will be reviewed on a case-by-case basis and specifically approved by the City. Private lanes will not be allowed to access more than three (3) single-family residences.

5. Street Section Properties:

A. Materials: All streets shall be constructed in accordance the current edition of the ISPWC and this Middleton Supplement to the ISPWC.

1. Structural sections to conform with urban road section standard drawings in Appendix B.

2. Asphalt: Plant mix design shall be submitted two weeks prior to asphalt placement and shall meet the requirements of a Class III mix or better.

B. Testing. The Developer shall test the roadway materials and placement per ISPWC. Storm drain facilities to be tested by the developer and functionality verified by the City. Contact the City for testing protocol for storm drain facilities. Developer's engineer shall provide certification of testing and testing results to the City.

1. Testing shall be by an independent testing laboratory and completed once every 300 linear feet with a minimum of two tests.

2. Asphalt: Density tests shall be performed by an independent testing laboratory and once every 8,000 square feet with a minimum of two tests. Core samples verifying thickness of asphalt shall be provided to the City.

6. Curb & Gutter:

A. Materials**:** All curb & gutter shall be constructed in accordance with the current edition of the ISPWC and shall have a minimum 28 day compressive strength of 4000 psi. ***Fiber mesh shall be included in all concrete construction***. The Developer shall provide concrete testing per the ISPWC.

B. Expansion Joints:

1. Shall be required in non-extruded curb and gutter at the beginning and end of

all points of curvature.

2. Shall be required at all joints between new concrete and existing concrete.

C. Type of Curb:

1. Residential streets interior to subdivisions: Standard 3" rolled curb and gutter.
2. Exterior streets and Collector streets: Standard 6" vertical curb and gutter.

D. Valley Gutters: Valley gutters shall be a minimum of 10" thick and 4'-0" wide with #4 rebar longitudinal at 12" on center and #4 rebar on both ends and in the middle. Valley gutter base shall be a minimum of 6" thick of three-quarter inch (3/4") crushed aggregate gravel placed as specified in Section 802 ISPWC.

E. Base for curb, gutter and sidewalk is required to be tested every 300 lf.

7. <u>Sidewalks:</u>

A. Materials: All sidewalks are concrete and shall have a minimum 28 day compressive strength of 4000 psi. ***Fiber mesh shall be included in ALL concrete*** The Developer shall provide concrete testing per the ISPWC**.**

B. Sidewalks shall be completely within street right-of-way or completely within an easement outside of street right-of-way, and shall not be partly in right-of-way and partly in an easement.

C. Width:

1. Sidewalks along both sides of local roads shall be minimum of five feet (5'). Sidewalks, trails or pathways along both sides of section and quarter-section line roads shall be eight feet (8') wide . Other pathways shall be ten (10) feet wide.

D. Trees may only be planted in public rights of way with a license agreement.

1. No trees are allowed to be planted in the forty foot (40') sight triangle.
2. No vegetation, fences, berms or other obstruction taller than three feet are allowed within the sight triangle.
3. Tree planting of any type is prohibited within ten feet (10') of any seepage bed or sand filter facility, structure, piping system, fire hydrant or utility box.
4. Class I, Class II, and Class III trees (listed in Appendix A) may be planted a minimum of five feet (5') away from sidewalk. All other trees not listed shall be planted at least fifteen (15') feet behind the back of the sidewalk.

E. Bore or channeling under a sidewalk is not allowed for any reason including water service, sewer service or irrigation system installation. Sleeves may be installed with approval from the City.

F. Base for curb, gutter and sidewalk is required to be tested every 300 lf.

8. Vertical Alignment

A. Any variation from grade which causes localized ponding will not be allowable.

B. Minimum Slope: Minimum slope of curb and gutter, measured parallel to the street centerline, shall be at least 0.40%.

C. Vertical grade change of 1.5% or greater requires a vertical curve.

9. Miscellaneous:

A. Street Cuts or Closures: The City shall be notified in writing at least two (2) City business days before any street cuts or street closures for utility or street work.

B. Vandalized Concrete: Any concrete vandalized during construction shall be repaired to new condition or replaced solely at the contractor's expense.

C. Prior to pouring valley gutter, curb & gutter and sidewalk a representative for the City shall approve compaction test results of the subbase material.

D. No trees or bushes shall be planted in the public right of way or in the utility easement running parallel and adjacent to the public right of way.

E. A box is required on each side of the right of way for gravity irrigation crossings.

F. The minimum Level of Service for intersection operation in the City of Middleton is Level C.

10. Street Lights

A. Street lights shall be installed at intersections, cul-de-sacs and at a maximum of 400 foot intervals, or as sufficient to support safety for all users, including pedestrians and non-motorized users.

B. Lighting layouts shall be submitted to the City Engineer for review and approval. Street lights are required to be furnished and installed per ISPWC Section 1102 and must generally conform to the following standards:

1. Poles: 25 feet high 4”SSS anchor base steel poles.
2. Luminaries: Shoe box style luminaries, LED source 56 watt minimum. Installation of OFF GRID solar lighting is encouraged in new developments,

especially in common areas and at locations on public streets, as designated by the City. Installation of OFF GRID solar lighting is required for parks and public buildings. All lighting planned and specified for installation, including solar, shall be submitted to the City for review and approval. Include specifically luminaire type, battery type, photovoltaic controller, temperature controller and other protective features. Conventional electric street lights are owned by the City of Middleton but maintained by Idaho Power.

3. Decorative lights or lights other than as specified above will be reviewed by the City on a case-by-case basis.
4. No direct bury steel or Wood poles are allowed to be installed.

11. Street Signs. Posts shall be type E-1 as shown in SD-1 130 of the ISPWC with 14 gauge wall thickness. Street signs shall be in conformance with Manual on Uniform Traffic Control Devices and shall be a nine-inch (9") blank, six-inch (6") all capital lettering, no border, with retro-reflective, high intensity background, with the street type superscript (upper right). Submit a shop drawing to the City for approval. Speed limit signs shall be installed by the developer - 20 mph for subdivision roads.

12. Fiber Optics. The City requires a fiber-optic based network be available in subdivisions so each roof top has access to fiber-speeds and fiber-volumes for data transfer. Fiber speeds/volume shall be delivered to each roof top or a blank conduit installed in joint trench or co-located in the front 10 foot utility easement.

    Developer shall install conduit and boxes for fiber optics in all local collector, collector and arterial street rights-of-way on or abutting the property being developed and to-and-through the project limits. Conduit shall be two (2) PVC 2 ½ inch conduit with brackets every 5 feet or less and locate wire. Pipe shall be Schedule 40, 24" bury (min) and sand bedded and installed in the rights of way. Conduit shall be installed with a fiberglass locate stake at every terminus and junction box or pull box at every intersection and bends of 90° and greater. Junction box(es) to be telecom vault (Larken or approved equal) 350 gallon, with cast iron ring and telecom lid. A conduit placement plan shall be submitted to the City for review. The plan shall detail the location, size and number of conduit and may be included or shown on utility plan sheets.

13. Traffic Impact Analysis. Per Middleton City Code, all subdivisions with more than 25

residential lots shall provide a traffic impact analysis. A traffic impact analysis may also be required by the City on a case by case basis. The traffic impact analysis shall consider at least the following:

- Obtain new AM and PM peak hour turning movement counts at study intersections identified by the City of Middleton.
- Coordinate with COMPASS to determine the most current background traffic forecasts.
- Estimate site traffic.
- Evaluate study intersections operations and recommend improvements to mitigate the AM and PM peak hour traffic impacts for the following traffic conditions:
- Existing traffic
- Horizon year (5 years beyond build out year) background traffic
- Horizon year (5 years beyond build out year) site plus background traffic
- Assess the need for exclusive turn lanes and intersection control at study intersections and the proposed site access intersections for all traffic conditions described above. The City may include additional conditions to be evaluated.
- Evaluate traffic operations at the proposed site access intersections.
- Estimate the site traffic portion and percentage of the total entering traffic for each study intersection.
- Summarize the results.

14. Monuments Disturbed by Construction Activities. Idaho Code 55-1613 shall be observed in the City of Middleton. IC 55-1613 partially reads:

    All monuments, accessories to corners, benchmarks and points set in control surveys that are lost or disturbed by construction shall be reestablished and remonumented, at the expense of the agency or person causing their loss or disturbance, at their original location or by setting of a witness corner or reference point or a replacement benchmark or control point, by or under the direction of a professional land surveyor. Please see Idaho Code 55-1613.

15. Preconstruction Meeting. The NOI must be filed and all necessary approvals, including City of Middleton, DEQ, highway district, Idaho Transportation Department (ITD) or others shall be in place prior to scheduling a preconstruction

meeting. Joint trench design is required to be furnished to the City 48 hours in advance of the preconstruction meeting and a construction schedule developed at the preconstruction meeting.

DRIVEWAYS:

Individual driveway approaches onto public roads are established at building permits issuance, per the site plan submitted. If the approved driveway needs modified, or an additional driveway or driving strips are requested, an application for an approach permit application is required to be submitted to the City. Upon receipt of the application, the City will evaluate the request per standards for site distance, lot coverage, impacts to stormwater facilities and other applicable items. If there are swales for stormwater treatment, the City may require installation of a partially-perforated culvert, perforations facing downward, with trash-racks on each end underneath the additional driveway or drive strips.

Residences having a three (3) car garage shall have a driveway width at least equal to the three (3) car garage that extends from the garage to the abutting public street.

Driveway Design Requirements on Local Roads

1. Where vertical curbs are required, residential driveways shall be restricted to a maximum width of 20-feet. These driveways may be constructed as curb cut type driveways.

2. All driveways are required to be paved full width and at least 30-feet into the site from the edge of pavement of the adjacent road.

3. If a driveway taking access to a public road is to be gated, the gate or keypad (whichever is closer to the road) shall be located a minimum of 50 feet from the adjacent road so the accessing vehicle is fully out of the traffic lane. An on-site turnaround shall be provided.

ACCESS

Local Roads

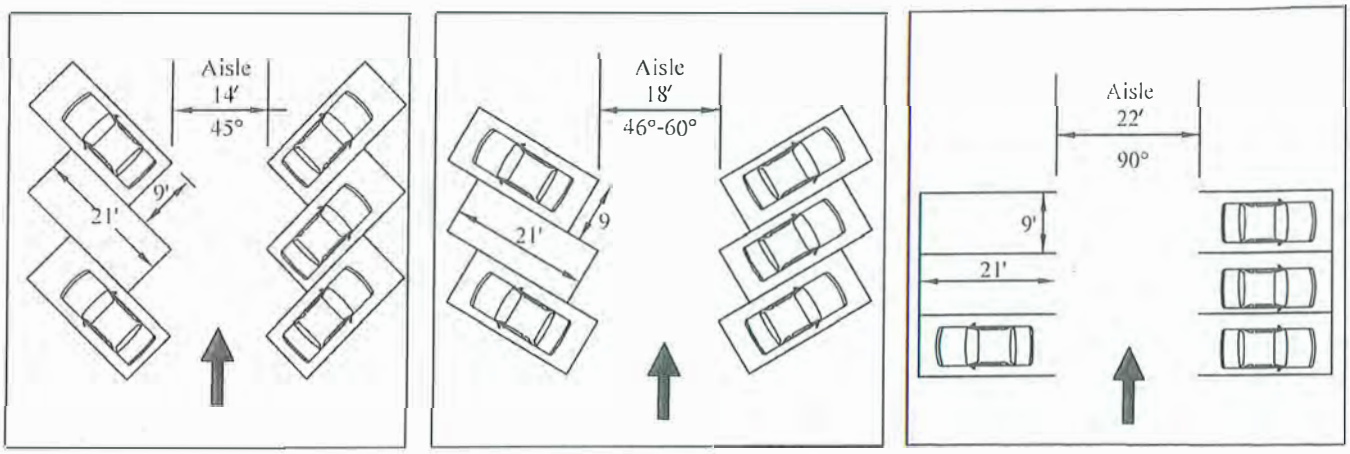
1. The primary function of a local road is to serve adjacent property. Adjacent property will usually have unrestricted access to the road, except near intersections, and Average Daily Traffic will be less than 2,000. Direct lot access to local roads from adjacent property is permissible.
2. Driveway Spacing Near Intersections. Driveways on local roads shall be located a minimum of 75 feet (measured centerline of road to centerline driveway) from the nearest road intersection. This is not applicable for single family dwelling units with lot sizes less than 75 feet in width.
3. Successive Driveways Away from intersections, there is no minimum spacing requirements for access points along a local road, but the City does encourage shared access points where appropriate.

Roads Other than Local

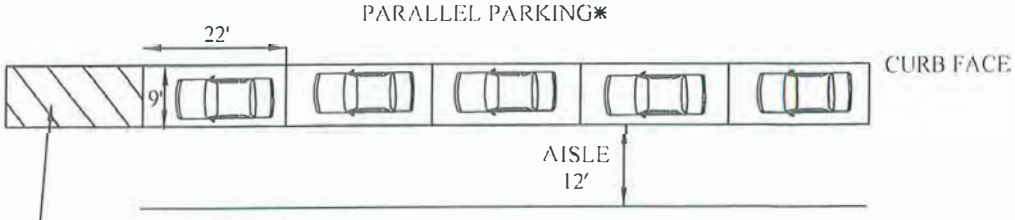
1. With the exception of collector roads located approximately one-half mile from adjacent arterial intersections, all new access, public or private, onto an arterial, collector, local collector, section-line or quarter-section line road, will be restricted to right-in/right-out access. The right-in /right-out access will include construction of a median type, to be approved by the city.
2. Direct access from roads other than local roads is permitted only when reasonable access cannot be obtained otherwise, as determined at the sole discretion of the city.
3. Additional access is not permitted upon the splitting or dividing of parcels of lands or contiguous parcels under the same ownership. The City may approve shared access or cross access may be permitted internally from the existing access.
4. Access near intersections is restricted and must be a minimum of 660 feet from the intersection and outside the functional area of the intersection in cases where the functional area may extend beyond the minimum distance.

PARKING LOT DIMENSIONAL STANDARDS: See attached drawing

OFF STREET PARKING AND LOADING
DIMENSIONS OF PARKING SPACES AND AISLES



PARALLEL PARKING*



*End space must have at least 20' of area in front for manuevering.

PROJECT INSPECTION:

1. <u>On Site Inspection:</u>

   A. The developers licensed engineer must supervise or conduct construction observation and inspection for all construction. See "Project Log" at paragraph 1.E below.

   B. The City shall be informed of the inspector's name, office location, phone number, and emergency telephone numbers if different from the developers licensed engineer.

   C. No water, sewer, street, or drainage construction shall take place without inspection.

   D. Periodic inspection shall be conducted by the City and/or the City Engineer, at no charge to the Developer, as detailed below:

   WATER SYSTEM

   1. Connection to existing main
   2. Thrust block installation (to be batched concrete).
   3. Potable and non-potable line crossings
   4. Verify bedding, finder wire, valve configuration and metallic tape placement
   5. Service installation. **City to verify materials and installation on first services installed.**

   SEWER SYSTEM

   1. Connect to existing main or manhole
   2. Verify pipe bedding
   3. Manhole EZ Wrap
   4. Drop manhole or special manhole construction
   5. Verify with contractor top cone placement for 12-inch grade rings

   FIBER OPTICS CONDUIT

   1. Verify placement generally per plan

   PRESSURIZED IRRIGATION

   1. Valves each side of right of way crossings
   2. Verify bedding and depth in right-of-way

STREETS

1. Subgrade
2. Stormdrain installation. Seepage beds/swales to free draining or other to be determined (TBD).
3. Sidewalk and valley gutter – top of base course
4. Fiber mesh in concrete
5. Rebar in valley gutter
6. Valley gutter 10 inches deep
7. Placement of road base
8. Paving
9. Concrete collars

E. Project Log: The on-site project inspector shall keep a written and photographic log detailing the daily activities of the project. The written and photographic log shall consist of the following (minimum):

1. Written: A written description of the daily activities including materials used and construction completed. Notes should also include day, time, weather conditions and any activity out of the ordinary.
2. Photographic: Inspector shall keep a photographic journal detailing connections to **existing City utilities, pipe intersections (thrust blocks), valves, and manhole connections**. Photos to be identified by stations or other location as represented on the plans and date.

F. Prior to any work within the City streets and rights-of-way, a permit to work in the public right of way shall be obtained from the City.

G. The City is required to inspect or observe the following:

1. Water main pressure test per ISPWC
2. Sewer main pressure test per ISPWC
3. Sewer main CCTV and mandrel test per ISPWC
4. Sewer manhole vacuum test per ISPWC
5. Stormwater mainline pressure test per ISPWC
6. Pressure irrigation system pressure test per ISPWC
7. Subgrade inspection after water, sewer and joint trench and prior to

hauling sub-base material.

8. Stormwater facilities installation, i.e. – seepage beds or swales
9. Water bacteria testing (two tests – at least 24 hours apart).
10. Water system continuity test
11. Irrigation pump station functional

2. Project Completion Packet:

The project completion packet consists of the items below compiled in a packet and submitted to the City. At the completion of construction, before the release of any security posted with the City, and before the City issues occupancy permits or signs the final plat, the City shall receive:

1. A copy of the inspection log;
2. A copy of the photographic journal;
3. Three (3) copies of legible Record Drawings and a digital copy of the record drawings in CADD as specified by the City
4. A digital copy of the final plat including the installed location of the water mains, valves, sanitary sewer mains, manholes, cleanouts, and storm sewer infrastructure including mains, inlets, containment areas and O/S boxes. Digital copy shall be in CADD and state plane coordinates or as requested by the City;
5. All test results shall be certified to the City by the developer's licensed Engineer.
6. All testing per ISPWC and Middleton Supplemental to be complete and added to the completion packet including water tests, pressure irrigation, compaction, etc. A graphic or plan sheet correlating the location of every project compaction test shall be included.
7. Irrigation as-built drawings shall be supplied to the city and the home owners association

3. Final Inspection:

A. The Developer's project engineer shall do the initial final inspection.

B. After the project engineer completes the walkthrough, he/she will submit a statement certifying a final walkthrough has been completed by him/her and the

project has been constructed in accordance with the ISPWC and City of Middleton Supplemental Specifications and is generally in conformance with the record drawing submitted and certify to the City that the project is ready for final inspection. The City will then schedule a final inspection.

C. The project completion packet shall be filed with the City and deemed complete prior to request for final inspection.

D. Final project inspection shall be by the City Engineer or a representative of the City Engineer.

E. Final inspections shall be requested by the developer's engineer and scheduled with the City Engineer at least two (2) City working days in advance.

F. Punch List:

1. The City Engineer will develop a "punch-list" of items.
2. When all items contained on the City's punchlist are completed and confirmed completed by the City, the City will issue a certificate of completion at which time the warranty period will start. Please see Appendix B for certificate of completion.

G. A one year warranty walkthrough will be performed by the City. A list of any infrastructure found to be defective, failing, or damaged will be provided to the developer. Repairs to items identified in the warranty walkthrough shall be verified complete by the City in 45 days or less.

APPENDIX A

STANDARD SPECIFICATIONS AND DETAILS
for
SANITARY SEWER LIFT STATIONS

1. INTRODUCTION: The following sewage lift station specifications provide minimum design requirements for proposed lift stations in the City of Middleton.

2. GENERAL REQUIREMENTS:

1. City Review and Acceptance:
   - A. All sewer lift stations shall be reviewed by the City prior to final plat submittal.
   - B. The City shall approve the selected sanitary sewer lift station mechanical components, electrical components, and construction materials used in the proposed lift station prior to final plat approval.
   - C. The developer's engineer shall provide the City with a complete operation and maintenance manual for the lift station prior to final walkthrough.
   - D. The developer's engineer shall provide for the City's staff operation training prior to final walkthrough.
   - E. All lift stations shall be duplex type and National Electrical Manufacturers Association (NEMA) rated as applicable.
2. Wet Well:
   - A. Wet wells shall have a minimum diameter of six feet (6), and made of precast concrete or City approved equivalent.
   - B. Wet well volume requirements shall be determined using "The Ten States Standards" and the appropriate design parameters and service area as defined by the City.
   - C. Wet well shall have a watertight outer coating or liner.
   - D. Wet well shall have an access cover for the pumps. The cover shall be one size larger than required by the pumps, but not less than 36" x 48". The access hatch shall be aluminum and traffic rated and lockable.

E. Wet well vents shall be no less than four inches (4") in diameter and be covered with a screen and capped.

F. Wet wells shall be configured to reduce turbulence in wet well. The pipe shall be drop pipe or shall be properly placed to mitigate turbulence.

G. Wet wells shall be equipped with a duplex pump system with surface bypass pumping capabilities.

3. Valve Vault:

A. A valve vault is required.

B. Vault shall meet DEQ and City of Middleton requirements.

C. Valve vault shall have a floor drain to drain accumulated water back to the wet well.

D. The minimum valve vault depth shall be at least 78 inches.

E. Access cover in valve vault shall have dimensions not less than 36"x 48" and the opening location approved by the City. The access cover shall be made of aluminum and be lockable. The cover shall be traffic-rated.

4. Pumps:

A. As a minimum, the station shall be sized for a duplex pumping system.

B. Pumps shall be designed for a minimum solids handling capacity of three inches (3").

C. Impeller may be a non-clog or grinder type impeller with adjustable wear plate as determined by the City of Middleton. Pumps shall be ABS or City-approved equivalent.

D. Stainless steel guide rails with a minimum diameter of two inches (2").

E. Stainless steel lifting cable, 5/16" dia, and shall have a stainless steel clevis hook at the connection to the pump. The steel lifting cable shall be equipped with 1 foot diameter stainless steel ring (D ring or approved other) at no more than 20 foot intervals measured up from the pump. At the ring and clevis, the lifting cable shall be connected by a 1-foot loop - each side. Submit shop drawing for City review and approval.

F. Stainless steel anchor bolts.

G. Stainless steel bolt packs with full face gaskets inside the wet well.

H. Explosion proof pumps, wiring and J-boxes

I. Pipe and cam lock fitting to allow for bypass pumping.

J. Variable frequency drives with harmonic filters shall be installed for pumps five horse power (5 hp) and larger

K. All pumps shall be soft start pumps.

L. Pump controls to be pressure transducer based and have redundant float installation.

5. Station Piping and Valves:

A. Piping into and out of the lift station and valve vault shall be ductile iron for a minimum of 10 feet.

B. Valves shall be resilient ball valves or resilient swing check valves. Manufacturer to be approved by City of Middleton. Isolation valves shall be one-quarter (1/4) turn resilient wedge plug valves, Mueller or City approved equivalent.

C. Piping and valving shall be designed so there is positive drainage into the wetwell.

D. Piping shall be Class 52 cement-lined ductile iron pipe with a fused calcium aluminate cement mortar lining (H_2Sewer Safe) as manufactured by Griffin Pipe Products meeting ANSI/AWWA standards

6. Site Requirements:

A. A yard light with motion detector.

B. A four inch (4") base of three-quarter inch (3/4") gravel compacted to ninety-five percent (95%).

C. Site may be required to install buffing landscaping.

D. A fire hydrant within 50 feet and on the same street side of the lift station building.

E. Control building if installed and as required, shall meet the following:

1. Pre manufactured or built in place construction;
2. Minimum interior dimension of ten feet by ten feet (10'x10');
3. An interior light door light and an exterior motion light;
4. Adjustable and on/off interior heating

5. SCADA System antenna mounting supports.

6. Supports and mounts for the control system of the lift station.

7. Exterior walls shall be rock, brick or other fascia to four feet above grade to prevent staining and degradation of the building exterior walls.

F. Lift station slab shall be four inch (4") thick continuous fiber-mesh reinforced concrete slab.

G. A street light shall be provided adjacent to the access road to the lift station, as required and as applicable.

H. Access shall be surfaced with four inches (4”) of three-quarter inch (3/4”) gravel 15 feet wide

I. A stainless steel adjustable lift pump hoist shall be provided, Halliday D3B36B or City approved equivalent.

J A stainless steel embedded socket base shall be provided and installed to the City specifications for the lift pump hoist, Halliday or City approved equivalent.

K. A post in concrete with stainless steel embedded socket as a anchor to attach a safety harness to while maintenance is being performed..

L. Yard shall be fenced using six foot (6’) chain-link with privacy slats and topped with three strands of taught barbed wire as approved by the City. Two access gates shall be provided, one three foot (3’) wide gate for people and one 14 foot wide vehicle gate, at locations approved by the City.

7. <u>Controls:</u>

A. Control panel shall have a dead front enclosure.

B. Submerged transducers with a sounding tube and suited for sewage, supported with removable stainless steel cable system.

C. Two floats. One float for emergency high level and one float for pump shutoff high level/low level.

D. Programmable level control.

E. Hands, off, and auto switches provided for each pump.

F. Flow meters for each pump with flow display continuous.

G. Accessible junction box above-ground with removable seal located on all cables entering the wet wells.

H. Manual transfer switch with generator receptacle.

I. 500 watt heater with thermostat in panel.

J. High level / low level alarm light with manual reset.

K. Outside alarm beacon illuminated when high level alarms occur.

L. Auto - dialer with six (6) hour battery back-up.

M. Underwriters Laboratory (UL) listed control panel matching pump manufacturer with full electronic read-out and gasketed cover on outer door.

N. Laminated schematic on inside of front door with panel serial number.

O. Night light for panel repair at site.

P. Lift station shall be remote radio and City SCADA system control compatible.

Q. Seal fail indication on each pump.

8. Spares Parts:

A. Five (5) each spare fuses of each size.

B. One (1) each spare relay of each size.

C. One (1) each spare transducer and controller with cable.

9. Local Service & Warranty:

Five (5) year pro-rated warranty on pumps and one (1) year on control panel. Local factory authorized warranty repair facility within 50 miles of station location.

3. BACK-UP GENERATOR:

A. A back-up generator shall be required and installed for a lift station which has pumps that are 15 HP and larger. For lift stations with a pumping size less than 15 HP it is acceptable to provide a gas powered by-pass pump with the appropriate plumbing for a complete system.

APPENDIX B

Miscellaneous Drawings, Check Lists, Applications, and Requirements

City of Middleton

Pre-Construction Submittal Checklist

General Submittal Category	Submittal Sub-Category	Yes	No	NA
Water	Fire Hydrants			
	Flushing Hydrants			
	Blow-Offs			
	Pipe			
	Pipe Fittings			
	Pipe Valves and Boxes			
	Locating Wire			
	Service Lines			
	Service Saddles			
	Corporation Stops			
	Curb Stops			
	Meter Setter and Appurtenances			
	Meter Lids (single knockout)			
	Meter Vaults			
Gravity Sanitary Sewer	Pipe			
	MH Base, Section, and Cone			
	MH Ring and Cover			
	MH Boot			
	MH Joint Sealant Between Barrels and Cone (mastic, gasket, or conseal)			
	MH Joint Sealant Exterior Sealant (Vulkem 116)			
	Manhole Joint Exterior Wrap (EZ Wrap)			
	Marking Tape			
Pressure Sanitary Sewer	Pipe			
	Fittings			
	Locating Wire			
	Clean-Out			
Sewer Services	Service Line			
	Service Connection (tee or wye)			
Stormwater	BMPs			
	Pipe			
	MH Base, Section, and Cone			
	MH Ring and Cover			
	MH Boot			

	MH Joint Sealant Between Barrels and Cone (mastic, gasket, or conseal)			
	MH Joint Sealant Exterior Sealant (Vulkem 116)			
	Manhole Joint Exterior Wrap (EZ Wrap)			
	Geotextiles			
	Sand and Grease Trap			
	Catch basins			
Pressure Irrigation System	Irrigation Design			
	Pipe and Fittings			
	Service Pipe and Fittings			
	Valve Box			
	Irrigation Entity Approval Letter			
Street	Concrete Mix (fiber)			
	Asphalt Mix			
	Base Materials - 3/4"			
	Subbase Materials - Pitrun			
	Thermoplastics			
	Street Lights (LED)			
	Fiber Optic			
	Street Signs and Posts			

City of Middleton

Post-Construction Submittal Checklist

General Submittal Category	Submittal Sub-Category	Complete		
		Yes	No	NA
Water	Pressure Test			
	Bacteria Test			
	Continuity Test			
	Thrust Blocks Documentation			
	Trench Compaction Test			
Gravity Sanitary Sewer	TV Inspection (CD and Notes)			
	Air Test			
	Manhole Test			
	Trench Compaction Test			
Pressure Sanitary Sewer Pipe	Pressure Test			
	Continuity Test			
	Trench Compaction Test			
Sewer Services	Air Test (part of Gravity Sewer)			
Stormwater	TV Inspection (CD and Notes)			
	Air Test			
	Manhole Test			
	Trench Compaction Test			
Pressure Irrigation System	Pressure Test per ISPWC			
Street	Subgrade Compaction Test			
	Sub-base and Base Compaction Test			
	Curb Compaction Test			
	Sidewalk Compaction Test			
	Construction Notes/Logs			
	Construction Photos			
	Concrete Testing per ISPWC			
Additional Documents	As-Built Drawings (3 copies)			
	Pressure Irrigation As-Built Drawings			
	Digital Plat			

CERTIFICATE OF COMPLETION

DATE OF ISSUANCE:

Project:

Development Owner:

Design Engineer:

The Work to which this Certificate applies has been received by a representative of the City of Middleton, and Work is hereby declared to be complete in accordance with the requirements set forth by the City and the City Engineer:

ITEMS REMAINING TO BE COMPLETED:

_____
DATE OF COMPLETION

The City of Middleton recognizes this project as complete and all warranties shall start as of the above date of completion.

ACCEPTANCE OF THIS CERTIFICATE OF COMPLETION:

City of Middleton:

By_____
Date

1103 W Main St.
Middleton ID 83644
(208) 585-3133

City Engineer:

By_____
Date

APPLICATION AND PERMIT TO EXCAVATE
IN PUBLIC RIGHTS OF WAY WITHIN MIDDLETION

DATE:	**NAME:**	MCC	
JOB:	**COMPANY NAME:**	**Office Use Only**	
		Permit No:	
		Rec. No:	
JOB LOCATION:	**COMPANY ADDRESS:**	Fee: (Check One)	
		$25.00	
		$50 over 150 SF	
COMPANY PHONE:			

UTILITY: (Check One)		Distance from Center Line:	ROW Line:
Overhead		Angle of Crossing:	Potential:
Underground		Size of Pipe:	Pressure:
Surface		Vertical Clearance:	Depth:

Attach drawing of work to be performed and applicable traffic control plans.

Description of Work to be Performed:	**Special Provisions:**

I certify that I am the authorized utility company representative and request permission to construct the above facilities within the City of Middleton right of way in accordance with the General Provisions attached with this form. The special provisions and the plans are made a part of this permit.

Applicant Name *(Please Type or Print above)*	

Signature of Authorized Representative *(Sign* Above)		**Date**

Subject to all terms, conditions and provisions shown on this form or attachments, permission is hereby granted to the above named applicant to perform the work described above.

LOCAL GOVERNMENT APPROVAL

:	
Public Works Supervisor	
DATE:	

The following must be included with this application: (Check to confirm attached.)

I. **Certificate of Liability Insurance**
Showing at least $500,000 Personal Injury and $1,000,000 General Aggregate. We reserve the right in more sensitive locations to request higher limits.

2. **Bond** In the amount of 115% of project until completion, and 10% of completed work for one (1) year after completion, executed by your insurance/bonding agent. The original shall be kept on file with the Middleton City Clerk.

3. **Inspection Fee**
Cash in the amount of **$500** for projects in excess of 100 feet and $200 for projects 100 feet or less. Any excess will be refunded; any deficiency will be billed.

Date	**Work Schedule**
	Work Begins
	Work Completed
	End of Warranty Period (to be modified accordingly based on actual completion of work)

NOTES:

A) An inspection of the proposed location of improvements (with appropriate premarking) shall be requested of the Public Works Supervisor prior to the issuance of any permit.

B) All trench repair/backfill shall be in accordance with ISPWC standards.

C) Compaction tests shall be completed in accordance with ISPWC and submitted to the City.

D) No Paving will be allowed in City Rights of Way after **October 15 or below the temperature as required by ISPWC.** All paving will be inspected and completed in accordance with ISPWC Standards.

E) No Construction will be allowed in Public Right of Way after **November 15.** All completed construction will be accompanied by an approved inspector's report.

F) The Public Works Supervisor will determine spring start up dates.

G) Contractor's hours of operation will be 7:00 am. to 4:00 pm. Monday through Friday.

H) In any case of street cuts, the permittee shall be required to back fill street cut and provide at least a temporary surface repair within 48 hours of opening such cut. Upon back filling any street cut and allowing access of such area to the public, the surface of such cut shall be kept in a maintained condition by the pernittee until permanently restored.

I) If driveway approach culverts are required. The Public Works Department shall approve the culvert size, which in any event shall not be less than **12 inches in diameter.**

J) Reasonable notification to the public and the Fire Department. Quick restoration of City service disruption (water, sewer, and traffic) is contractor's responsibility.

CONTRACTOR INFORMATION SHEET

Please fill in the following information:

(Date Completed:_____)

COMPLETE NAME OF COMPANY/CONTRACTOR:					
CORPORATION		**PARTNERSHIP**	**JOINT VENTURE**		**PROPRIETOR**
MAILING ADDRESS:					
OFFICE PHONE:			EMERGENCY PHONE **(24 hrs):**		
PERSON(S) TO CONTACT:					
NAME OF LOCAL LIABILITY INSURANCE COMPANY:					
AGENT'S NAME:					
MAILING ADDRESS:					
OFFICE PHONE:			EXTENSION NO:		
PERSON(S) ALLOWED TO SIGN FOR PERMITS: NAME:			TITLE:		
TYPE OF WORK PERFORMED BY YOUR COMPANY					
CONCRETE WORK			**ASPHALT WORK**		
DRIVEWAY APPROACHES			DRIVEWAY TIE-INS		
SIDEWALKS			ALLEYS		
CURBS & GUTTERS			STREETS		
EXCAVATION ONLY (ON THOSE ITEMS MARKED ABOVE)					
WATER LINES			SEWER LINES		
OTHER WORK AS SPECIFIED:					

GENERAL PROVISIONS

1. During the process of the works such as barricades, lights and other traffic control devices shall be erected and maintained as may be necessary or as may be directed for the protection of the traveling public. Said barricades, lights and other traffic control devices shall conform to the current issue of The Manual on Uniform Traffic Control Devices for Streets and Highways. Parked equipment and stored materials shall be as far from the travelway as feasible. Items left overnight within 30 ft. of travelway shall be marked and/or protected.

2. In accepting this permit, the permittee, its successors and assigns agree to hold the City of Middleton harmless from any and all liability on account of the erection, installation, construction, maintenance or operation of the facilities located under this permit.

3. Except as herein authorized, all underground crossings shall be bored °decked. No excavation shall be made or obstacle placed within the right of way of the City or Middleton in such a manner as to interfere with travel over said roadway.

4. Any disturbance oldie traveled surface of the road and/or traffic control devices shall be restored to the satisfaction of the Public Works Supervisor.

5. If the work done under this permit interferes in any way with the drainage of the roadway, the permittee shall wholly and at his own expense make such provision as the Public Works Supervisor may direct to provide for said drainage.

6. On completion of said work herein contemplated all rubbish and debris shall be immediately removed and the roadway and roadside shall be left neat and presentable to the satisfaction of the Public Works Supervisor.

7. All of the work herein contemplated shall be done to conform with current government and industry standards under the supervision and to the satisfaction of the Public Works Supervisor and the entire expense of said supervision shall be borne by the permittee.

8. The City hereby reserves the right at any time in the future to order the change of location or the removal of any structure(s) or facility(ies) authorized by this permit. Said change or removal to be made at the sole expense of the permittee, or its successors and assigns, unless such structure(s) or facility(ies) have been located pursuant to the special provisions.

9. All such changes, reconstruction or relocation by the permittee shall be done in such a manner as will cause the least interference with any of the functions of the City of Middleton.

   This permit or privilege granted under _____shall not be deemed or held to be an exclusive one and shall not prohibit the City of Middleton from granting other permits or franchise rights of like or other nature to other public or private utilities, nor shall it prevent the City of Middleton tom using any of its roads, streets, or public places or affect its right to full supervision and control over all or any part of them, none of which is hereby surrendered.

The City may revoke, amend, amplify or terminate this permit or any of the conditions herein enumerated if permittee fails to comply with any or all of its provisions, requirements or regulations as herein set forth or through willful or unreasonable neglect, fails to heed or comply with notices given, or if the utility herein granted is not installed or operated and maintained in conformity herewith.

12. The permittee shall maintain at its sole expense the structure or subject for which the permit is granted,

13. Adequate drawings or sketches shall he included showing the existing and/or proposed location of the facility with respect to the existing and/or planned location of the road improvement, the traveled way, the rights of way lines, and where applicable, the control of access lines and approval access points.

14. If trench or pavement settlement should occur within two years from the date of installation, repairs shall be made by the permittee as directed by the Public Works Supervisor at no cost to the City. 1 f the permit tee rails to make the necessary repairs, the City will make the repairs and bill the permittee. No new permits shall be issued to the permittee until such claim has been settled.

15. No work shall be started until an authorized representative of the Public Works Department has given notice to the permittee to proceed.

16. A bond in the amount of $_____is required for the protection of the City of Middleton as set forth in the terms of the bond.

17. Any replacement of, addition to, or change in the facility granted by this permit shall require a new permit prior to initiation of such work.

PERMIT TO BE VOIDED IF WORK NOT COMPLETED BY_____

NOTES:

(A) ALL PRODUCTS AS LISTED.

(B) NO GALVANIZED PIPE OR YELLOW BRASS FITTINGS TO BE USED.

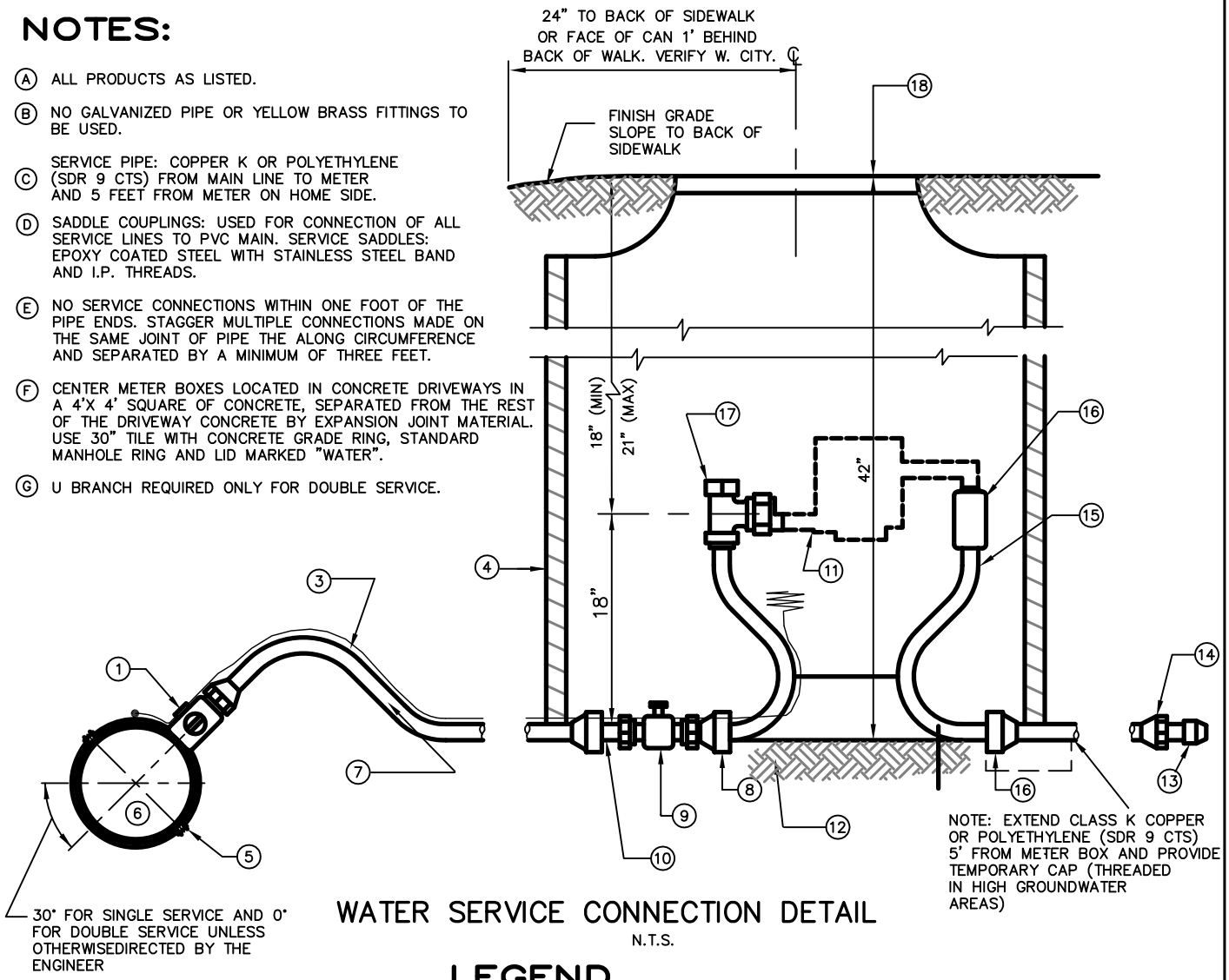
(C) SERVICE PIPE: COPPER K OR POLYETHYLENE (SDR 9 CTS) FROM MAIN LINE TO METER AND 5 FEET FROM METER ON HOME SIDE.

(D) SADDLE COUPLINGS: USED FOR CONNECTION OF ALL SERVICE LINES TO PVC MAIN. SERVICE SADDLES: EPOXY COATED STEEL WITH STAINLESS STEEL BAND AND I.P. THREADS.

(E) NO SERVICE CONNECTIONS WITHIN ONE FOOT OF THE PIPE ENDS. STAGGER MULTIPLE CONNECTIONS MADE ON THE SAME JOINT OF PIPE THE ALONG CIRCUMFERENCE AND SEPARATED BY A MINIMUM OF THREE FEET.

(F) CENTER METER BOXES LOCATED IN CONCRETE DRIVEWAYS IN A 4'X 4' SQUARE OF CONCRETE, SEPARATED FROM THE REST OF THE DRIVEWAY CONCRETE BY EXPANSION JOINT MATERIAL. USE 30" TILE WITH CONCRETE GRADE RING, STANDARD MANHOLE RING AND LID MARKED "WATER".

(G) U BRANCH REQUIRED ONLY FOR DOUBLE SERVICE.



WATER SERVICE CONNECTION DETAIL

N.T.S.

LEGEND

(1) CORPORATION STOP SHALL BE THREE-QUARTER INCH (3/4") FOR A SINGLE SERVICE LINE AND ONE AND ONE-HALF INCH (1 1/2") FOR A DOUBLE SERVICE LINE. SHALL BE M.I.P. (TO SADDLE) BY COMPRESSION CONNECTION (TO SERVICE LINE).

(2) NOT USED.

(3) NO. 12 COPPER FINDER WIRE. SEE ISPWC SD-514 FOR SPLICING.

(4) 18" DIA. X 42" DEEP METER BOX FOR SINGLE. 24" DIA. X 42" DEEP METER BOX FOR DOUBLE. (NOTCH FOR SERVICE LINES).

(5) SERVICE SADDLE: ROMAC (SINGLE STAINLESS STEEL STRAP) FOR WATER MAIN LESS THAN 12" IN DIAMETER OR ROMAC (DOUBLE STAINLESS STEEL STRAP) FOR WATER MAIN GREATER THAN 12" IN DIAMETER. SHALL BE F.I.P. THREAD CONNECTION.

(6) WATER MAIN.

(7) POLYETHYLENE (SDR 9 CTS) OR CLASS K COPPER PIPE: 3/4" MIN. FOR SINGLE SERVICE AND 1 1/2" FOR DOUBLE SERVICE. NO SPLICE IN SERVICE LINE.

(8) METER YOKE END CONNECTION: MUTLI-PURPOSE THREAD (TO METER YOKE) BY M.I.P.

(9) CURB STOP SHALL BE BALL VALVE TYPE. SHALL BE F.I.P. BY F.I.P.

(10) U-BRANCH: COMPRESSION FITTING (TO SERVICE LINE) BY M.I.P.

(11) WATER METER FURNISHED AND INSTALLED BY CITY OF MIDDLETON.

(12) FIRM UNDISTURBED EARTH. (SET ON 2" X 22" DIAMETER PRECAST CONCRETE BLOCK IF OVER EXCAVATION OCCURS).

(13) COPPER CAP.

(14) SERVICE FITTING: BRASS 3/4" COMPRESSION CONNECTION BY M.I.P.

(15) METER SETTER: 18" MINIMUM MUELLER B-2404-2N WITH 5/8" X 3/4" WITH LOCK WING MUELLER 300 ANGLE BALL VALVE.

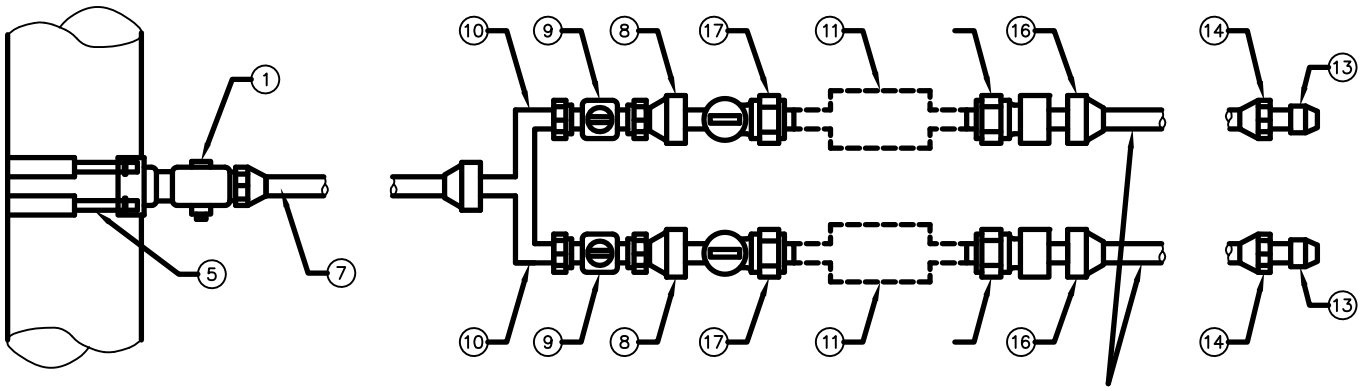
(16) METER YOKE END CONNECTION: MULTI-PURPOSE THREAD BY COMPRESSION CONNECTION.

(17) LOCK WING MUELLER 300 ANGLE BALL VALVE.

(18) LID COVERS TYLER UNION TYPE 6150 WITH SINGLE KNOCKOUT IN PLACE. SET 0.2' ABOVE BACK OF SIDEWALK GRADE OR FINISHED GRADE.

CITY OF MIDDLETON SUPPLEMENTAL STANDARDS

MODIFIED WATER SERVICE CONNECTION DETAIL



NOTE: EXTEND CLASS K COPPER OR POLYETHYLENE (SDR 9 CTS) 5' FROM METER BOX AND PROVIDE TEMPORARY CAP (THREADED IN HIGH GROUNDWATER AREAS)

NOTES:

(A) ALL PRODUCTS AS LISTED.

(B) NO GALVANIZED PIPE OR YELLOW BRASS FITTINGS TO BE USED.

(C) SERVICE PIPE: COPPER K OR POLYETHYLENE (SDR 9 CTS) FROM MAIN LINE TO METER AND 5 FEET FROM METER ON HOME SIDE.

(D) SADDLE COUPLINGS: USED FOR CONNECTION OF ALL SERVICE LINES TO PVC MAIN. SERVICE SADDLES: EPOXY COATED STEEL WITH STAINLESS STEEL BAND AND TAPER THREADS

(E) NO SERVICE CONNECTIONS WITHIN ONE FOOT OF THE PIPE ENDS. STAGGER MULTIPLE CONNECTIONS MADE ON THE SAME JOINT OF PIPE THE ALONG CIRCUMFERENCE AND SEPARATED BY A MINIMUM OF THREE FEET.

(F) CENTER METER BOXES LOCATED IN CONCRETE DRIVEWAYS IN A 4'X 4' SQUARE OF CONCRETE, SEPARATED FROM THE REST OF THE DRIVEWAY CONCRETE BY EXPANSION JOINT MATERIAL. USE 30" TILE WITH CONCRETE GRADE RING, STANDARD MANHOLE RING AND LID MARKED "WATER".

(G) U BRANCH REQUIRED ONLY FOR DOUBLE SERVICE

WATER SERVICE CONNECTION DETAIL

N.T.S.

LEGEND

(1) CORPORATION STOP SHALL BE THREE-QUARTER INCH (3/4") FOR A SINGLE SERVICE LINE AND ONE AND ONE-HALF INCH (1 1/2") FOR A DOUBLE SERVICE LINE. SHALL BE M.I.P. (TO SADDLE) BY COMPRESSION CONNECTION (TO SERVICE LINE).

(2) NOT USED.

(3) NO. 12 COPPER FINDER WIRE. SEE ISPWC SD-514 FOR SPLICING.

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(11) WATER METER FURNISHED AND INSTALLED BY CITY OF MIDDLETON.

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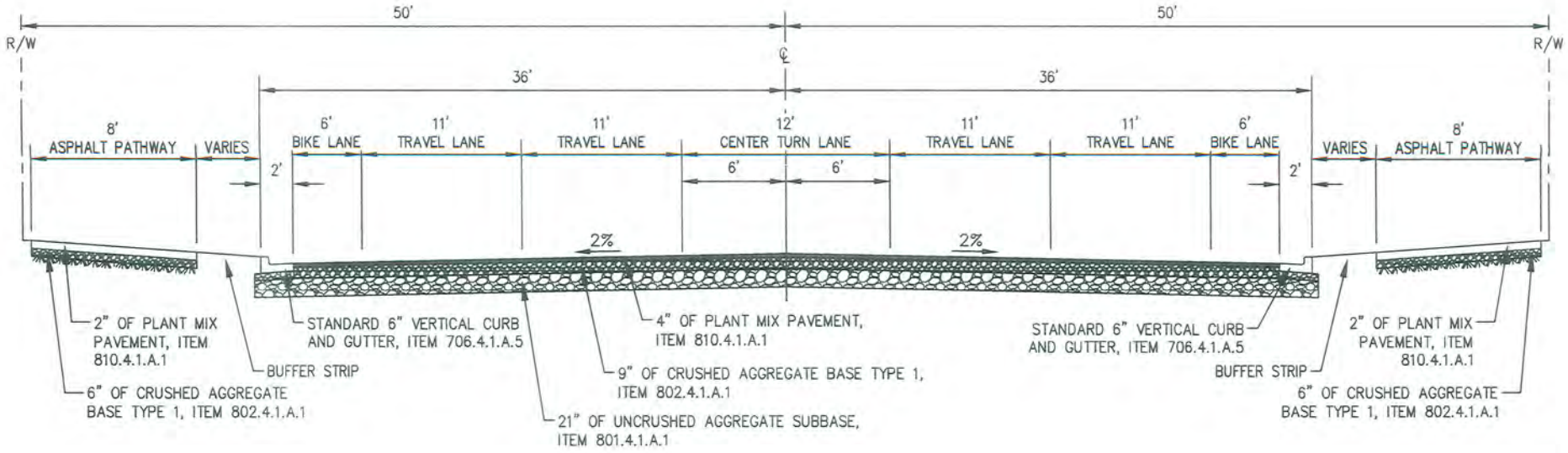
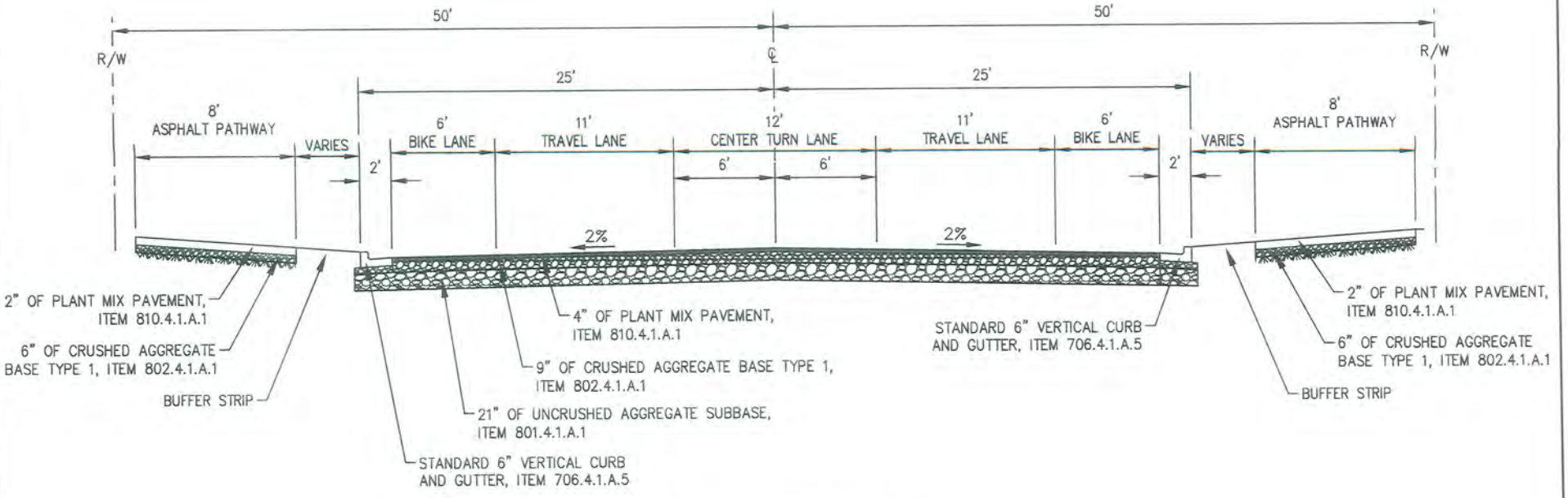


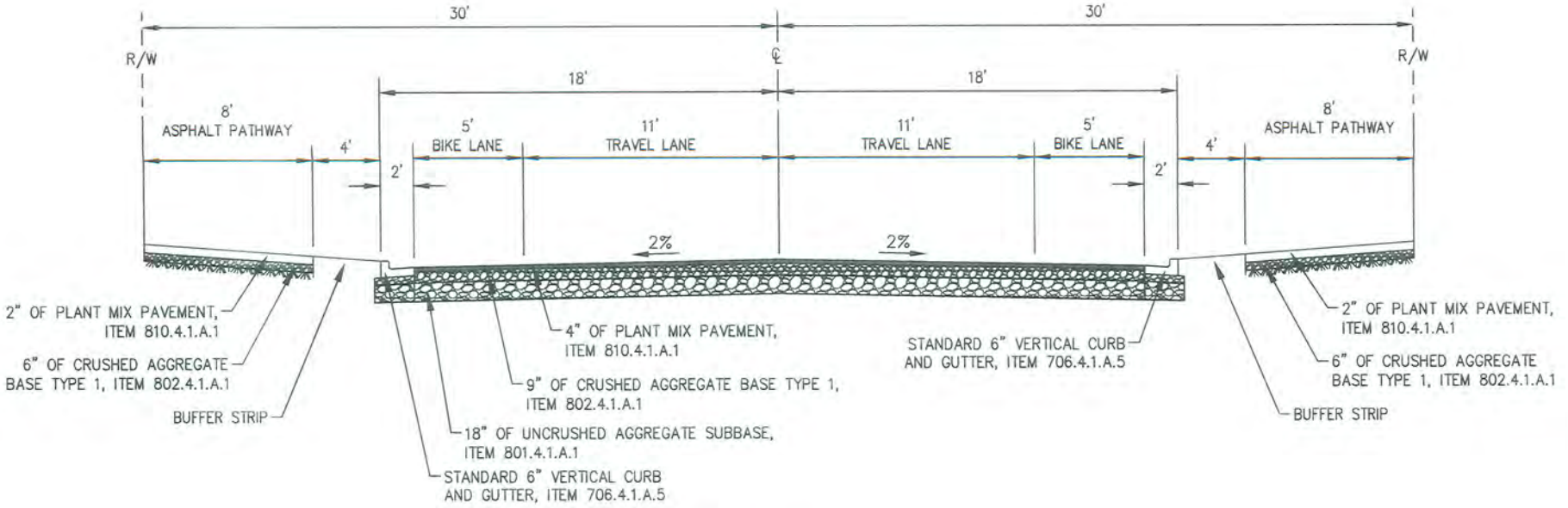
City of Middleton
Five-Lane Urban Roadway Typical Section - 50' Half Width ROW

NOT TO SCALE



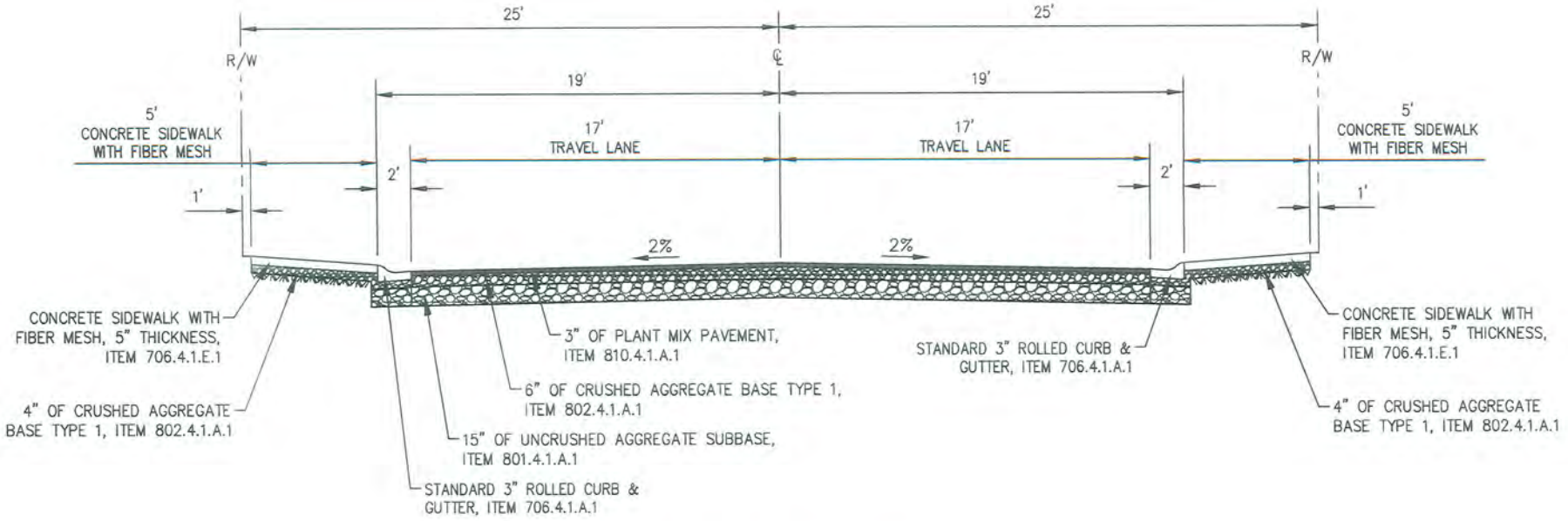
City of Middleton
Three-Lane Urban Roadway Typical Section - 50' Half Width ROW

NOT TO SCALE



City of Middleton
Local Collector Roadway Typical Section - 30' Half Width ROW

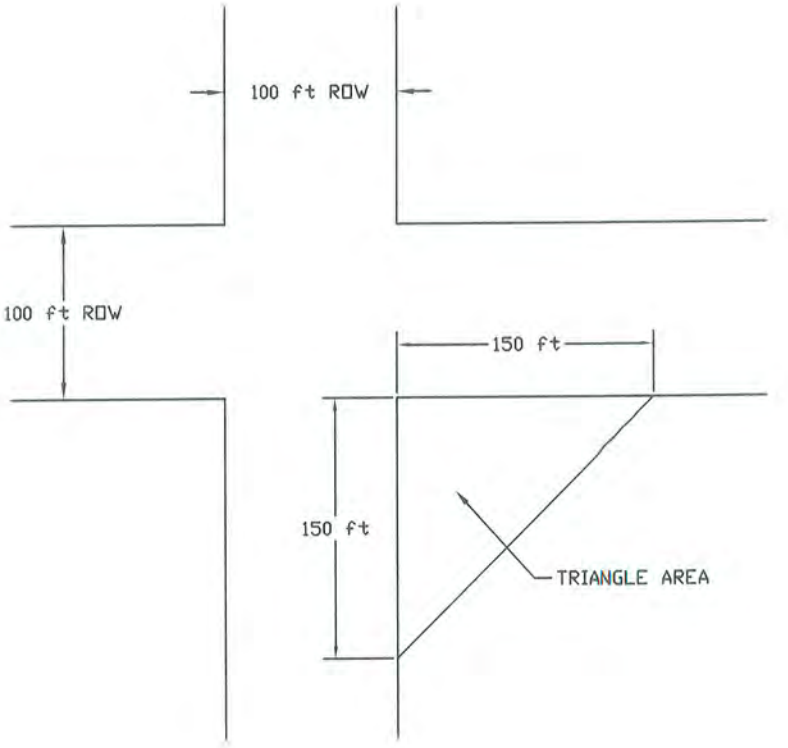
NOT TO SCALE



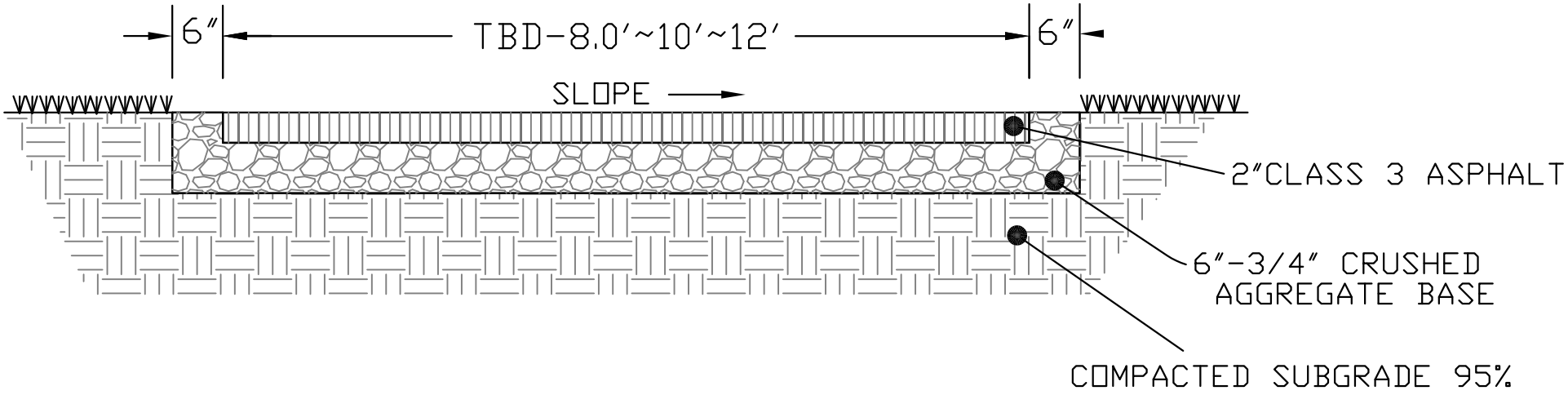
City of Middleton
Local Roadway Typical Section - 25' Half Width ROW

NOT TO SCALE

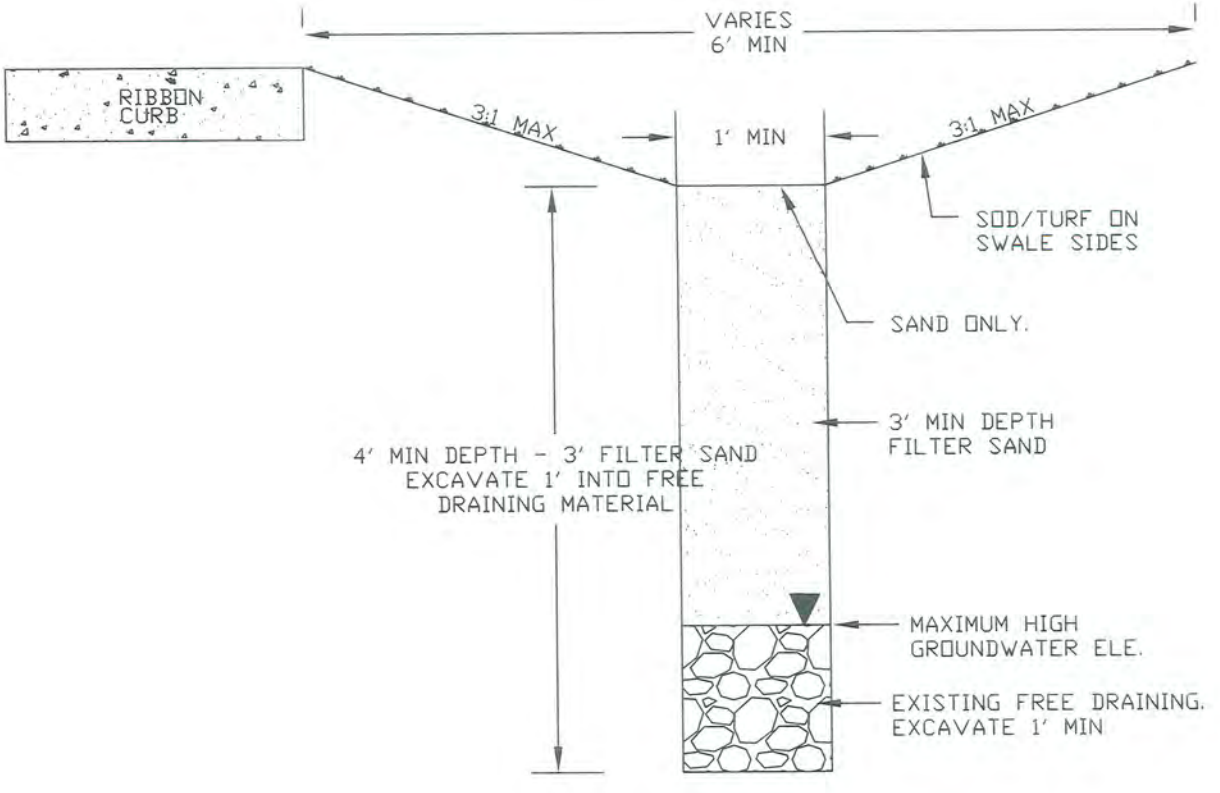
CITY OF MIDDLETON - SUPPLEMENTAL SPECIFICATION
RIGHTS OF WAY AT SECTION LINE/QUARTER SECTION LINE ROAD INTERSECTIONS



RIGHT OF WAY DEDICATION AT SECTION
LINE AND QUARTER SECTION LINE ROADS (NTS)



CITY OF MIDDLETON
SEPARATED PATHWAY
TYPICAL SECTION



CITY OF MIDDLETON ROADSIDE SWALE X-SECTION

CLASS I

- Crabapple, Red and White Flowering
- Flowering Dogwood/Goldenraintree
- Washington Hawthorn/Japanese Tree Lilac
- Saucer Magnolia/Amur Maple
- Hedge Maple/Flowering Pear
- Blireiana Plum/Eastern Redbud
- Staghorn Sumac

CLASS II

- Mountain Alder/Green Ash
- Raywood Ash/White Ash
- River Birch/Amur Corktree
- Turkish Hazel/Ginkgo
- Hackberry/Honeylocust
- Hornbeam/Horsechestnut
- American Linden/Littleleaf Linden
- Silver Linden/Cucumbertree
- Norway Maple/Sugar Maple
- Japanese Pagodatree/Persimmon
- Sweetgum/Yellowwood

CLASS III

- European Beech/Northern Catalpa
- Kentucky Coffeetree/Black Cottonwood
- Bur Oak/English Oak
- Red Oak/Swamp White Oak
- London Planetree/Tuliptree

NOT ALLOWED IN RIGHTS OF WAY OR WITHIN 15 FEET OF SIDEWALK:

Conifers
Silver Maple
Red Maple
Boxelder or Sensation Maple
Poplar
Quaking Aspen
Willow
Elm
Black Locust
Honey Locust
Black Walnut
Tree of Heaven
European Ash