

## GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE LIGHTING EQUIPMENT INSTALLED AS PART OF THE CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF ONE-HUNDRED AND EIGHTY (180) DAYS. IN THE EVENT OF UNSATISFACTORY OPERATIONS, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS FROM THE SAME MANUFACTURER. MATERIAL AND LABOR COSTS INCURRED IN CORRECTING THE UNSATISFACTORY OPERATIONS SHALL BE BORNE BY THE CONTRACTOR. THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS: LIGHTING CONTROL CENTER, LIGHT POLES, AND DECORATIVE LUMINARIES. CUSTOMARY MANUFACTURER'S GUARANTEE FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE VILLAGE FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

## SPECIFICATIONS TO INSTALL NEW STREETLIGHTS TO EXISTING NEIGHBORHOODS FOR CITY MAINTENANCE

IN ORDER FOR ADDITIONAL OR MID-BLOCK STREETLIGHTS TO BE INSTALLED AND MAINTAINED BY THE VILLAGE, ALL THE FOLLOWING CRITERIA MUST BE ADHERED TO:

- A. THE LIGHT SHALL BE OF THE SAME STYLE OF THE EXISTING LIGHTS OF THE NEIGHBORHOOD AND ADHERE TO THE SPECIFICATIONS OF THAT STYLE STATED ABOVE.
- B. SHALL BE INSTALLED AT NO LESS THAN 200 FEET FROM ANY OTHER STREETLIGHT AND MUST BE LOCATED WITHIN THE RIGHT-OF-WAY.
- C. SHALL BE APPROVED BY A MAJORITY OF THE PROPERTY OWNERS ON THE BLOCK (WHO ARE WITHIN 200 FEET OF THE PROPOSED LOCATION)

- D. SHALL BE CONTAINED WITHIN AN EXISTING STREETLIGHT WIRING SYSTEM IN THE NEIGHBORHOOD OR COMMERCIAL-INDUSTRIAL DEVELOPMENT
- E. SHALL NOT DISTRACT TRAFFIC PATTERNS WITHIN RIGHT-OF-WAY OR CONFLICT WITH PERSONAL PROPERTY ISSUES WITHIN 200 FEET OF THE INSTALLATION.
- F. CANNOT BE PLACED IN ALLEYS, SIDE ACCESS OR PRIVATE DRIVES.

## NON-STANDARDIZED STREETLIGHT INSTALLATION

ADDITIONS OF STREETLIGHTS WITHIN THE VILLAGE RIGHT-OF-WAY THAT CREATE A SPACING LESS THAN 200 FEET OR DO NOT COMPLY WITH THE VILLAGE STREET LIGHTING SPECIFICATIONS ARE NOT PERMITTED TO BE INSTALLED.

## SPECIFICATIONS TO INSTALL NEW STREETLIGHTS IN ALLEYS, DRIVES, AND WITHIN PRIVATE PROPERTY

COSTS FOR A STREETLIGHT OR SECURITY LIGHT IN ALLEYS, DRIVES OR WITHIN PRIVATE PROPERTY WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER(S). REQUESTS FOR SUCH LIGHTING INSTALLATIONS SHALL:

- A. CONFORM TO VILLAGE SPECIFICATION AND REGULATIONS
- B. MUST BE APPROPRIATELY INSTALLED BY A CERTIFIED CONTRACTOR THROUGH THE LOCAL UTILITY COMPANY OR CERTIFIED ELECTRICAL CONTRACTOR REGISTERED WITHIN THE VILLAGE
- C. SHALL NOT DISTRACT TRAFFIC WITHIN THE VILLAGE RIGHT-OF-WAY, OR OTHERWISE CONFLICT WITHIN NEIGHBORING PERSONAL PROPERTY ISSUES WITHIN 200 FEET OF THE INSTALLATION
- D. SHALL HAVE PLANS REVIEWED BY THE PUBLIC WORKS DIRECTOR IF LOCATED NEAR THE PUBLIC RIGHT-OF-WAY OR VILLAGE EASEMENTS.

## 'SWITCH-OVER' FROM STANDARD STREET LIGHTS TO DECORATIVE STREET LIGHTS SPECIFICATIONS

IN ORDER FOR DECORATIVE STREET LIGHTING TO BE INSTALLED IN RESIDENTIAL AREAS THAT HAVE EXISTING STANDARD LIGHTS AND POLES, ALL OF THE FOLLOWING CRITERIA MUST BE MET:

- A. PETITION TO INSTALL DECORATIVE LIGHTS MUST HAVE 100% OF PROPERTY OWNERS SIGNATURES FOR APPROVAL WHERE LIGHTING IS TO BE INSTALLED.
- B. ALL INSTALLATION FEES AND ASSOCIATED COSTS FOR THE SWITCH-OVER SHALL BE AT THE EXPENSE OF THE DEVELOPER, NEIGHBORHOOD OR REQUESTER(S).

- C. THE VILLAGE SPECIFICATIONS FOR DECORATIVE (RESIDENTIAL) SHALL BE FOLLOWED FOR THE NEW INSTALLATION.
- D. DECORATIVE LIGHTS SHALL ONLY BE INSTALLED ALONG RESIDENTIAL STREETS.
- E. THE ENTIRE LENGTH OF THE RESIDENTIAL STREET SHALL BE SWITCHED-OVER. NO MID-BLOCK OR PORTIONS OF THE STREET WILL BE ACCEPTED.
- F. MINIMUM LENGTH OF STREET(S) TO BE SWITCHED OVER IS 1350 FEET, INCLUDING CUL-DE-SAC. MINIMUM NUMBER OF LIGHTS AND POLES CHANGES SHALL BE 10 UNITS OR MORE.
- G. AREA OF SWITCH -OVER CAN BE CONTIGUOUS WITH A THOROUGHFARE OR COLLECTOR STREET, BUT NOT INCLUDE STREET LIGHTING ON THE THOROUGHFARE OR COLLECTOR STREET.
- H. ELECTRICAL SERVICE SHALL ONLY BE UNDERGROUND WIRING AND CONDUIT. NO ROADWAYS SHALL BE OPEN CUT UNLESS ROAD IS OVER FIVE (5) YEARS OLD.
- I. FINAL DESIGN/LAYOUT MUST BE APPROVED BY THE PUBLIC WORKS DIRECTOR BEFORE PRESENTATION AND/OR APPROVAL BY CITY COUNCIL.
- J. AREAS OF SWITCH OVER SHALL BE RECOMMENDED AND PRESENTED TO CITY COUNCIL BY THE PUBLIC WORKS DIRECTOR OR HIS DESIGNEE AFTER APPROVAL OF FINAL DESIGN/LAYOUT.

## PRIVATE DEVELOPMENT LIGHTING SPECIFICATIONS

ALL ENTRANCES, PARKING AREAS, WALKWAYS, STEPS, ETC. SHALL BE WELL LIGHTED TO ENSURE SAFETY OF THE SITE. HOWEVER THE LIGHTING SHALL BE PLACED AND DIRECTED IN A MANNER THAT THE GLARE OF BEAM IS DIRECTED AWAY FROM THE STREET AND ADJOINING PROPERTIES. ALL FIXTURES SHALL CONFORM TO THE CITY ENGINEERING STANDARDS PER CHAPTER 1133.05 OF THE CITY PLANNING AND ZONING CODE.

- A. MINIMUM LIGHT LEVELS SHALL COMPLY WITH THE ILLUMINATION ENGINEERING SOCIETY PUBLICATION FOR OUTDOOR LIGHTING.
- B. MAXIMUM LIGHT LEVELS IN A COMMERCIAL AREA SHALL BE TWO FOOT CANDLES AT THE CURB LINE WITH NO SIGNIFICANT GLARE. ONCE THE LIGHTING IS INSTALLED AND ENERGIZED SHIELDS SHALL BE PLACED BY THE DEVELOPER AS NEEDED TO PREVENT GLARE ON THE ROADWAY AS DETERMINED BY AN ON-SITE INSPECTION.
- C. MAXIMUM LIGHT LEVELS IN A RESIDENTIAL AREA SHALL BE ONE FOOT CANDLE AT THE CURB LINE WITH NO SIGNIFICANT GLARE ONTO THE STREET. ONCE THE LIGHTING IS INSTALLED AND ENERGIZED SHIELDS SHALL BE PLACED BY THE DEVELOPER AS NEEDED TO PREVENT GLARE ON THE ROADWAY AS DETERMINED BY AN ON-SITE INSPECTION.
- D. MAINTENANCE FACTOR USED SHALL BE 0.71 UNLESS OTHERWISE APPROVED BY THE VILLAGE ENGINEER.



# PUBLIC RIGHT-OF-WAY STREET LIGHTING AND SITE DEVELOPMENT LIGHTING

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## STREETLIGHTS (STANDARD)

STANDARD STREETLIGHTS ARE 100 WATT HIGH PRESSURE SODIUM (HPS) TEAR DROP STYLE FIXTURE. THE LUMINAIRE SHALL BE HOLOPHANE CATALOG #PH100HP48N2Q120396, OR APPROVED EQUAL. THE LUMINAIRE SHALL BE FINISHED WITH POLYESTER POWDER PAINT BLACK. THE LUMINAIRE SHALL BE U.L. LISTED SUITABLE FOR WET LOCATIONS AT 40 DEGREES C. RESIDENTIAL FIXTURES SHALL BE 9,500 LUMENS. COMMERCIAL OR INDUSTRIAL FIXTURES SHALL BE 16,000 LUMENS.

THE LUMINAIRE SHALL HAVE A WIRING CHAMBER AT THE TOP WITH 1-1/2 INCH NPT THREADED ENTRY FOR PENDANT MOUNTING. STAINLESS STEEL SET SCREWS SHALL BE PROVIDED TO LOCK THE UNIT IN POSITION ON THE FITTER. THE CHAMBER SHALL HAVE A TERMINAL BLOCK PREWIRED WITH A PLUG THAT CONNECTS TO THE ELECTRICAL MODULE.

THE REFRACTOR/DOOR ASSEMBLY SHALL HAVE A CAST ALUMINUM DOOR TO CRADLE THE TEARDROP SHAPED GLASS REFRACTOR. THE REFRACTOR SHALL PROVIDE AN I.E.S. TYPE II CUT OFF DISTRIBUTION. THE REFRACTOR ASSEMBLY SHALL BE HINGED FROM THE ELECTRICAL REFLECTOR ASSEMBLY AND SECURED IN PLACE WITH A STAINLESS STEEL, CAPTIVE WING NUT LATCH ASSEMBLY.

THE DECORATIVE ARM FITTER SHALL BE DESIGNED TO MATCH THE LUMINAIRE. THE FITTER BODY SHALL BE HEAVY WALL CAST ALUMINUM WITH TOP COVER AND THREADED MALE CONNECTOR FOR ATTACHMENT TO THE LUMINAIRE. THE FITTER SHALL BE SUPPLIED WITH TWO (2) STAINLESS STEEL SET SCREWS THAT LOCK THE FITTER TO THE 2" BRACKET. THE UNIT SHALL ALLOW MINIMUM ADJUSTMENTS OF +5 DEGREES HORIZONTAL AND +4 DEGREES VERTICAL. THE CAST TOP COVER SHALL BE REMOVABLE TO ALLOW ACCESS TO THE WIRE CONNECTIONS. ALL MOUNTING AND LOCKING HARDWARE SHALL BE STAINLESS STEEL. THE FITTER SHALL BE FINISHED WITH POLYESTER POWDER PAINT, BLACK TO MATCH THE LUMINAIRE. THE FITTER SHALL BE HOLOPHANE UNIQUE SOLUTIONS CATALOG #BHLF200CADG OR APPROVED EQUAL.

STREETLIGHTS SHALL BE MOUNTED ON THREADED WOODEN POLES, WITH A 6 FOOT ALLUMINUM MOUNTING BRACKET AND INSTALLED AT 250-FOOT STAGGERED SPACING. THE MOUNTING HEIGHT TO LIGHT CENTER SHALL BE 28' UNLESS OTHERSIED APPROVED BY THE VILLAGE. THE MOUNTING BRACKET SHALL HAVE A 30-INCH RISE AND CAPABLE OF SUPPORTING A 60 POUND LUMINAIRE. THE BRACKET SHALL HAVE A 2" NPS X 6" SLIPFITTER. A 1" WIRE HOLE WITH GROMMET SHALL BE PROVIDED ON THE BOTTOM OF THE BRACKET NEAR THE MOUNTING PLATE. A 2" X 3/4" X 1/4" ALUMINUM CHANNEL SCROLL SHALL BE ATTACHED TO THE BOTTOM OF THE BRACKET BY A 1/2" S.S. BOLT. THE BRACKET AND SCROLL SHALL HAVE A BLACK POWDER COAT FINISH TO MATCH THE LUMINAIRE. THE BRACKET SHALL BE HAPCO CATALOG NO. A76306 OR APPROVED EQUAL.

SHOP DRAWINGS MUST BE SUBMITTED TO THE VILLAGE FOR REVIEW AT LEAST SEVEN (7 DAYS PRIOR TO ORDERING MATERIALS FOR REVIEW AND APPROVAL.

## DECORATIVE STREETLIGHTS (RESIDENTIAL)

THE DECORATIVE LIGHT POLES SHALL BE PHILIPS HANOVER (MODEL 391-12-BLK) 12' POLE, WITH POLE BASE WRAP (MODEL 140-3-BLK), OR APPROVED EQUAL. THE POLES SHALL HAVE A BLACK FINISH AS INDICATED BY THE MODEL NUMBERS.

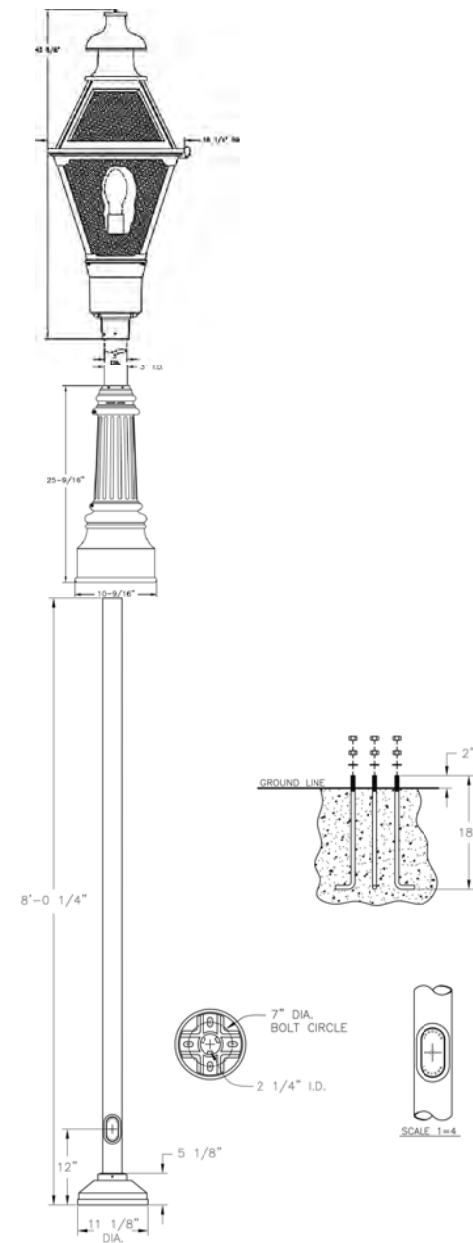
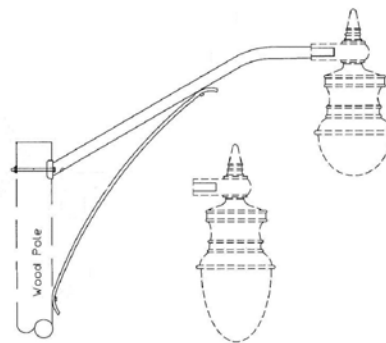
THE DECORATIVE POST SHALL BE CAST ALUMINUM WITH A TGIC THERMOSET POLYESTER PODERCOAT PAIT THAT IS ELECTROSTATICALLY APPLIED. THE POLE SHALL BE U.L. OR E.T.L. LISTED IN THE U.S. THE POLE BASE WRAP SHALL BE CONSTRUCTED WITH A STRAIGHT 3 INCH DIAMETER SHAFT. THE POLE SHALL BE U.L. OR E.T.L. LISTED IN THE U.S.

FOUR 1/2" DIAMETER, HOT-DIPPED GALVANIZED "L" TYPE ANCHOR BOLTS SHALL BE PROVIDED WITH THE POST FOR ANCHORAGE. A DOOR SHALL BE PROVIDED FOR WIRING AND ANCHOR BOLT ACCESS. IT SHALL BE SECURED WITH TAMPER PROOF, STAINLESS STEEL HARDWARE, AND BE WEATHER RESISTANT. POST WILL BE PROVIDED WITH A GROUNDING STUD MOUNTED ON THE BASE FLOOR OPPOSITE THE ACCESS DOOR.

THE LUMINAIRE SHALL BE STERNBERG LIBERTYVILLE 1914 LUMINAIRE (PART #G743 / OLF-CF-3" / 100HPSMT / MOG / BKT), OR APPROVED EQUAL.

THE FITTER SHALL BE HEAVY WALL CAST ALUMINUM, 360 DIE CAST ALLOY FOR HIGH TENSILE STRENGTH. FIXTURE SHALL BE U.L. OR E.T.L. LISTED IN U.S. AND CANADA.

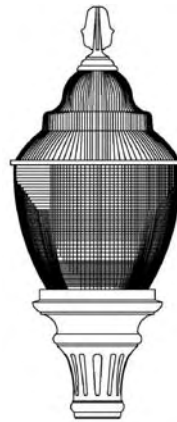
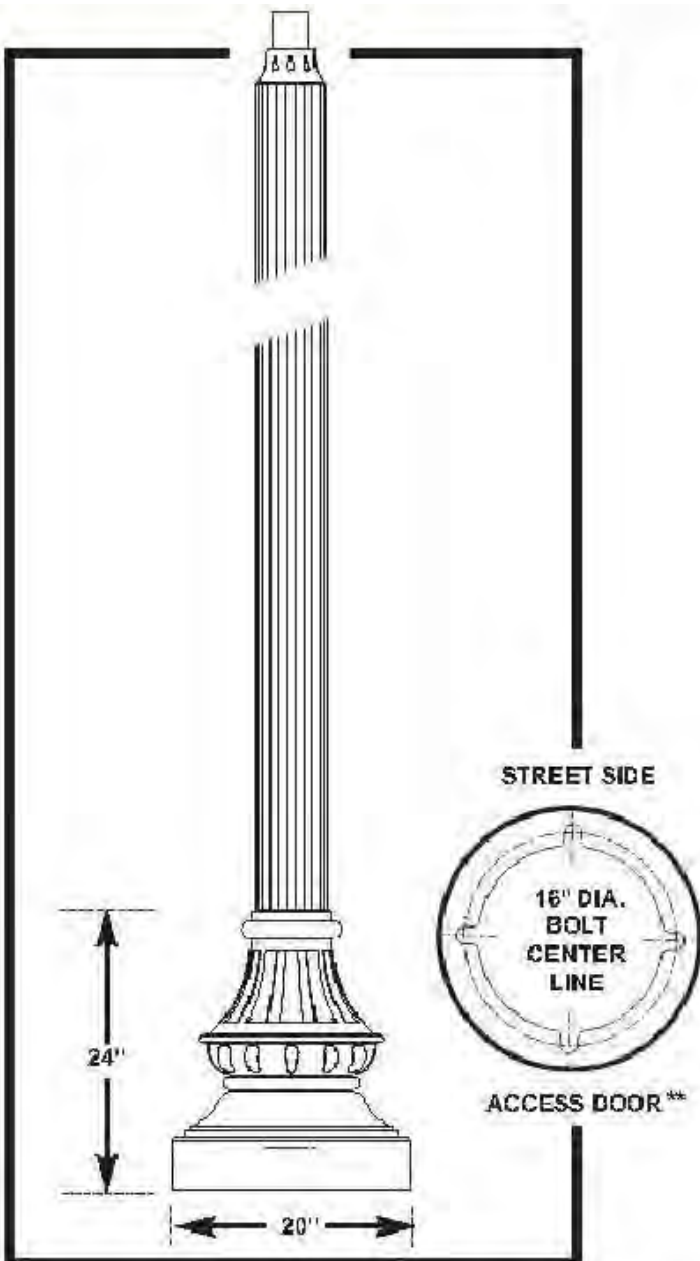
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## DECORATIVE STREETLIGHTS (DOWNTOWN)

THE DECORATIVE LIGHT POLES SHALL BE STERNBERG BARRINGTON SERIES (MODEL 5213'8" ETFP6 / SCO / GFB / FH / DBA / BK) 13'-8" POLE, OR APPROVED EQUAL. THE POLES SHALL HAVE A BLACK FINISH AS INDICATED BY THE MODEL NUMBERS.

THE DECORATIVE POST SHALL BE ALUMINUM, ONE-PIECE CONSTRUCTION. THE 20" DIAMETER CAST ALUMINUM FLUTED BASE SHALL BE CONSTRUCTED WITH A 6 INCH DIAMETER ALUMINUM SHAFT. THE POLE SHALL BE U.L. OR E.T.L. LISTED IN THE U.S.

THE BASE SHALL BE DESIGNED WITH TWELVE CURVED FLUTES AND TEARDROP DECORATIONS AND BE MADE OF HEAVY WALL, 356 ALLOY CAST ALUMINUM. IT SHALL HAVE A 1" THICK FLOOR CAST AS AN INTEGRAL PART OF THE BASE. THE SHAFT SHALL BE DOUBLE CIRCUMFERENTIALLY WELDED INTERNALLY AND EXTERNALLY TO THE BASE FOR ADDED STRENGTH. THE EXTRUDED TAPERED FLUTED SHAFT SHALL BE MADE OF ASTM 6063 EXTRUDED ALUMINUM AND TEMPERED TO A T6 CONDITION.

FOUR 3/4" DIAMETER, HOT-DIPPED GALVANIZED "L" TYPE ANCHOR BOLTS SHALL BE PROVIDED WITH THE POST FOR ANCHORAGE. A DOOR SHALL BE PROVIDED FOR WIRING AND ANCHOR BOLT ACCESS. IT SHALL BE SECURED WITH TAMPER PROOF, STAINLESS STEEL HARDWARE. POST WILL BE PROVIDED WITH A GROUNDING STUD MOUNTED ON THE BASE FLOOR OPPOSITE THE ACCESS DOOR.

THE LIGHT POLES SHALL HAVE AN INTEGRAL FESTOON GFC OUTLET WITH COVER, FACTORY ATTACHED AND FINISHED, LOCATED ONE (1) FOOT BELOW THE TOP OF THE LIGHT POLE. THE FESTOON OUTLETS SHALL BE ORIENTED DURING INSTALLATION TO FACE 180 DEGREES AWAY FROM THE CENTERLINE OF THE ROADWAY AND FACE THE SIDEWALK. THE FESTOON OUTLETS SHALL BE WIRED TO BE OPERATIONAL ONLY WHEN THE LIGHTING CIRCUIT IS TURNED ON BY THE PHOTO CELL CONTROL AT THE LIGHTING CONTROL CENTER.

THE POLES SHALL INCLUDE A SET OF FIXED BANNER ARMS AND A FLAG POLE HOLDER BOTH MANUFACTURED BY THE SAME VENDOR AS THE POLE HAVING THE SAME POLE COLOR AND FINISH. THE SET OF FIXED BANNER ARMS SHALL EXTEND OUT APPROXIMATELY 15" TO 18" FROM THE SIDE OF THE POLE. THE FESTOON GFC OUTLET WITH COVER, ASSOCIATED WIRING, FLAG POLE HOLDER AND SET OF FIXED BANNER HOLDERS SHALL BE PROVIDED TOGETHER.

THE LUMINAIRE STYLE IS INTENDED TO MATCH THE HISTORIC VILLAGE OF JOHNSTOWN LUMINAIRES, AND SHALL BE STERNBERG LIBERTYVILLE 1914 LUMINAIRE (PART #G743 / OLF-CF-3" / 100HPSMT / MOG / BKT), OR APPROVED EQUAL.

THE FITTER SHALL BE HEAVY WALL CAST ALUMINUM, 360 DIE CAST ALLOY FOR HIGH TENSILE STRENGTH. FIXTURE SHALL BE U.L. OR E.T.L. LISTED IN THE U.S.

SHOP DRAWINGS MUST BE SUBMITTED TO THE VILLAGE FOR REVIEW AT LEAST SEVEN (7) DAYS PRIOR TO ORDERING MATERIALS FOR REVIEW AND APPROVAL.



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### TREE PLANTING IN PUBLIC RIGHT-OF-WAY

A. ALL TREES PLANTED IN THE PUBLIC RIGHT-OF-WAY SHALL HAVE THEIR TYPE AND LOCATION APPROVED BY THE VILLAGE TREE BOARD, OR THEIR CITY STAFF REPRESENTATIVE PRIOR TO INSTALLATION.

### DRAINS

A. ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED AND PROVIDED WITH UNOBSTRUCTED OUTLETS AS APPROVED AND DIRECTED BY THE VILLAGE AND MARKED ON THE RECORD DRAWINGS.

### CONNECTIONS TO EXISTING PIPE

A. WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

### UTILITY SEPARATION

A. ANY UNDERGROUND UTILITIES SUCH AS GAS, ELECTRIC, CABLE TV, TELEPHONE, ETC., SHALL HAVE 10' SEPARATION FROM ANY VILLAGE UTILITY UNLESS OTHERWISE APPROVED.

### UTILITIES

A. THE MAXIMUM LENGTH OF ANY UTILITY TRENCH TO BE OPEN AT ANY TIME SHALL BE 100' UNLESS OTHERWISE APPROVED.

### COMPACTION METHODS

A. FLOODING SHALL NOT BE PERMITTED.

B. MECHANICAL DEVICES, HAND DEVICES, VIBRATING PLATES OR OTHER EQUIPMENT APPROVED BY THE VILLAGE ARE ACCEPTABLE 1" ABOVE PIPE IN UNIFORM LIFTS OF 12" (LOOSE DEPTH) OF EXISTING NATIVE MATERIAL AND 6" OF GRANULAR BACKFILL. THE HEIGHT OF LIFTS WILL DEPEND UPON THE TYPE OF MECHANICAL EQUIPMENT BEING USED. THE HEIGHT WILL BE 6" FOR HAND OPERATED TOOLS AND UP TO 12" ON EQUIPMENT MOUNTED TOOLS. THE COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE MATERIAL UNDER THE HAUNCH OF THE PIPE.

C. JETTING IS APPROVED FOR ODOT 603, TYPE 2 GRANULAR MATERIAL ONLY IF A STORM DRAIN IS AVAILABLE AS A DRAINAGE OUTLET FOR THE REMOVAL OF EXCESS WATER. A 4" MAXIMUM LIFT SHALL BE ADHERED TO. SATISFACTORY DRAINAGE SHALL BE PROVIDED BY THE USE OF DRAINAGE DITCHES, PUMPS OR OTHER EQUIPMENT. ALL WATER MUST BE METERED FOR COMPACTION METHOD.

D. DENSITY FOR THE ABOVE METHODS SHALL BE NO LESS THAN THAT OF THE SURROUNDING GROUND UNLESS OTHERWISE SPECIFIED.

### DISPOSAL OF SURPLUS MATERIAL

A. THE VILLAGE MAY AT ITS DISCRETION REQUIRE THAT SURPLUS MATERIAL BE DEPOSITED AT A LOCATION DESIGNATED WITHIN A THREE-MILE RADIUS OF THE WORK SITE.

### TYPICAL NOTES - ALL SUBDIVISION CONSTRUCTION DRAWINGS

A. ALL CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH THE VILLAGE ENGINEERING STANDARDS OR ODOT, WHICHEVER IS MORE RESTRICTIVE.

B. ALL COMPACTION SHALL MEET THE VILAGE REQUIREMENTS. IF TESTING OF COMPACTED AREAS IS REQUESTED BY THE VILLAGE, SAID TESTING SHALL BE PERFORMED AT THE EXPENSE OF THE DEVELOPER.

C. DEVELOPER/CONTRACTOR SHALL UTILIZE PROOF ROLLING TECHNIQUES TO DETERMINE THE NEED FOR UNDERCUTTING. THE ENTIRE SUBGRADE SHALL BE PROOF ROLLED WITH A FULLY LOADED TANDEM AXLE (OR LARGER) DUMP TRUCK DRIVEN ACROSS THE SUBGRADE AS DIRECTED BY THE VILLAGE INSPECTOR ON SITE. SUBGRADE WILL NOT BE APPROVED UNTIL NO DEFLECTION OR TIRE INDENTATION IN SUBGRADE MATERIAL IS PRESENT. IF ANY DEFLECTION IS OBSERVED THE SUBGRADE SHALL BE STABILIZED BY EITHER UNDERCUTTING OR UTILIZING TENSAR OR OTHER APPROVED SOIL STABILIZATION METHODS.

D. ALL EMBANKMENT AND SUBGRADE AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF ASTM D698 STANDARD PROCTOR CURVE AND TESTED TO REPRESENT A DEPTH OF 12" UNLESS OTHERWISE SPECIFIED BY THE VILLAGE.

E. ALL UNPAVED AREAS WITHIN THE STREET RIGHT-OF-WAY SHALL BE SEEDDED WITHIN 48 HOURS AFTER THE CURB IS BACKFILLED. STAKED STRAW BALES MAY BE REQUIRED IN ADDITION TO SEEDING TO CONTROL EROSION IF REQUESTED BY THE VILLAGE.

F. STORM WATER POLLUTION PREVENTION SHOULD BE A HIGH PRIORITY ON ALL CONSTRUCTION PROJECTS. ON ALL PROJECTS WHICH DISTURB AT LEAST 5 ACRES OF SOIL, A NPDES PERMIT IS REQUIRED FROM OEPA AND A COPY OF THE PERMIT MUST BE ON FILE AT THE VILLAGE OFFICE BEFORE CONSTRUCTION BEGINS.

G. THE FINAL LIFT OF ASPHALT CONCRETE SURFACE COURSE IN RESIDENTIAL SUBDIVISIONS IS TO BE PLACED THE FOLLOWING CONSTRUCTION SEASON AFTER THE BASE COURSE IS PLACED, BUT AT LEAST TWO MONTHS PRIOR TO THE EXPIRATION OF THE MAINTENANCE SURETY, WILL NEED TO BE EXTENDED TO ALLOW FOR A TWO MONTH PERIOD.

H. A PUNCH LIST MUST BE REQUESTED WITHIN 30 DAYS AFTER SUBSTANTIAL COMPLETION.



## GENERAL NOTES

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**SEEDING AND MULCHING**

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES. ALL AREAS ARE TO BE SEEDED WITH AN LAWN MIX AS DESCRIBED IN THE 2008 ODOT CMS, ITEM 659, TABLE 659.09-1. WORK FOR THIS ITEM WILL BE PAID AT THE LUMP SUM PRICE UNDER ODOT ITEM 659 - SEEDING AND MULCHING CLASS 1.

**TOPSOIL FURNISHED AND PLACED**

THREE-INCHES (3") OF TOPSOIL SHALL BE APPLIED TO ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY BY THE CONTRACTOR AS SHOWN ON THE TYPICAL SECTION. WORK FOR THIS ITEM SHALL BE PAID BY THE CUBIC YARD UNDER ITEM 653.

**UTILITIES IN PAVEMENT**

THE PAVING CONTRACTOR SHALL LOCATE ALL UTILITIES IN THE PAVEMENT PRIOR TO PAVING OPERATIONS. THE PAVER SHALL LEAVE A ¼" REVEAL FOR ALL MANHOLES, VALVES, ETC. IN THE PAVEMENT.

**UTILITY TRACER WIRE:**

TRACER WIRE TO BE STEEL CORE COPPER CLAD REINFORCED WIRE # 12 AWG, WITH 30 MIL HIGH DENSITY POLYETHYLENE COATING. TRACER WIRE SHALL BE # 12 AWG CONTINUOUS STRAND, HAVE A MINIMUM 380 LBS. TENSILE BREAK LOAD AND FOLLOW APWA UNIFORM COLOR CODE (BLUE = WATER, GREEN = SEWER). TRACER WIRE TO BE INSTALLED OVER ALL WATERLINES, SEWER LINES, LATERALS AND FORCE MAINS WHETHER OR NOT TELEMETRY WIRE IS BURIED WITH THE PIPE AND BE ATTACHED DIRECTLY TO PIPE AT THE 12 O'CLOCK POSITION USING CORROSION FREE PLASTIC ZIP TIES. TRACER WIRE RUNS SHALL BE CONTINUOUS FOR A MAXIMUM RUN OF 1000-FEET. THE WIRE SHALL BE KEPT CONTINUOUS AND LOOPED AROUND FIRE HYDRANTS, VALVES, CURB BOXES AND MANHOLES/VAULTS.

IF WIRE SPLICING IS ABSOLUTELY UNAVOIDABLE, USE ONLY APPROVED SPLICE KIT FILLED WITH MOISTURE DISPLACEMENT SILICONE FOR CORROSION RESISTANT PROTECTION. 3-WAY WIRE CONNECTIONS FROM MAIN TO TERMINATION BOX WILL BE MADE ONLY WITH APPROVED DIRECT BURY CONNECTOR WITH MOISTURE DISPLACEMENT SILICONE FILLED CAP FOR CORROSION RESISTANT PROTECTION.

TO TERMINATE TRACER WIRE A MAGNETIZED TERMINATION BOXES FEATURING A CORROSION-RESISTANT BRASS WIRE LUG AND A WAX PAD TO COVER WIRE CONNECTIONS AFTER INSTALLATION AND LOCK MOISTURE OUT SHALL BE USED. TERMINATION BOX SHALL BE CAPABLE OF ALLOWING CONNECTION TO UNDERGROUND WIRES WITHOUT REMOVING THE CAP. LOOP 18-24 INCHES OF WIRE INSIDE TERMINATION BOX. TERMINATION BOXES SHALL BE PLACED AT THE ENDS OF ALL RUNS, AT ALL ROAD INTERSECTIONS AND AT INTERVALS NOT TO EXCEED 500-FEET, AS APPROVED BY THE ENGINEER.

IF DIRECTIONAL DRILLING OR BORING IS REQUIRED, ONLY STEEL CORE COPPER CLAD REINFORCED EXTRA HIGH STRENGTH WIRE WITH A 45 MIL HIGH DENSITY POLYETHYLENE (HDPE) COATING AND A MINIMUM 1150 LBS. TENSILE BREAK LOAD SHALL BE USED.

CONTRACTOR SHALL SCHEDULE A CONDUCTIVITY/LOCATE TEST (CONDUCTED BY CITY) UPON COMPLETION. TRACER WIRE, SPLICE KIT AND TERMINATION BOX SHALL BE MANUFACTURED BY COPPERHEAD INDUSTRIES OR APPROVED EQUAL. THE COST OF ALL TRACER WIRE AND APPURTENANCES SHALL BE INCLUDED IN THE PRICE BID FOR THE PIPE.

**UTILITY DETECTABLE WARNING TAPE:**

DETECTABLE WARNING TAPE SHALL HAVE A SOLID ALUMINUM CORE AND BE A MINIMUM OF 6-INCHES WIDE AND 4-MILS THICK. TAPE SHALL BE CONTINUOUSLY INSCRIBED WITH "CAUTION BURIED \_\_\_\_\_ LINE BELOW" AND FOLLOW APWA UNIFORM COLOR CODE (BLUE = WATER, GREEN = SEWER). THE TAPED MUST BE IMPERVIOUS TO DESTRUCTIVE ELEMENTS FOUND IN SOIL.



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## LOW STRENGTH MORTAR BACKFILL

A. IN SITUATIONS WHERE UTILITIES CROSS HEAVILY TRAVELED STREETS OR IT MAY BE DIFFICULT TO GET ADEQUATE COMPACTION ON GRANULAR MATERIAL, LOW STRENGTH MORTAR BACKFILL WILL BE REQUIRED PER ODOT ITEM 613 TYPE 1 ONLY. THE VILLAGE MAY REQUIRE THIS TYPE OF BACKFILL AT THEIR DISCRETION WITH THE COST BEING BORNE BY THE CONTRACTOR.

## BORING/JACKING

### A. MATERIALS.

CASING PIPE SHALL BE WELDED STEEL PIPE CONFORMING TO AWWA C-202. WITH BITUMINOUS OR PETROLEUM COATING.

### B. INSTALLATION (CASING PIPE).

1. FURNISH PROCEDURE METHODS TO THE VILLAGE FOR APPROVAL.
2. ALL METHODS AND PROCEDURES SHALL BE APPROVED BY THE VILLAGE PRIOR TO CONSTRUCTION.
3. ADEQUATELY SUPPORT ALL TRENCHES AND BORING/JACKING PITS.
4. INSTALL TO LINE AND GRADE SHOWN.

### C. INSTALLATION (CARRIER PIPE).

1. PLACE CONDUITS IN CASING PIPE TO SAME RELATIVE POSITIONS AS ADJACENT DUCT BY USE OF SPACERS.
2. FILL THE SPACE BETWEEN CONDUITS INSIDE THE CASING PIPE WITH CLEAN SAND OR OTHER APPROVED MATERIALS AS APPROVED BY THE VILLAGE.

## STEEL CASING PIPE

A. STEEL PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 35,000 PSI.

B. JOINTS BETWEEN THE SECTIONS OF PIPE SHALL BE FULLY WELDED AROUND THE COMPLETE CIRCUMFERENCE OF THE PIPE.

C. SIZE—A MINIMUM OF 4" GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE, EXCLUDING BELL SECTIONS.

D. A STEEL CASING PIPE WILL BE REQUIRED FOR STORM SEWER, WATER MAIN, AND SANITARY SEWER. SIZE OF THE CASING PIPE WILL NEED TO BE DESIGNED FOR EACH INDIVIDUAL INCIDENT AND APPROVED BY THE SERVICE DIRECTOR.

WATERMAIN SIZE (INCHES)	DIAMETER NOMINAL (INCHES)	NOMINAL THICKNESS (INCHES)
	10 AND UNDER	0.188
	12 & 14	0.250
8	16	0.281
	18	0.312
12	20 & 22	0.344
16	24	0.375
	26	0.406
	28	0.438
20	30	0.469
	32	0.500
24	34 & 36	0.532
	38	0.562
	40	0.594
	42	0.625
	44 & 46	0.657
	48	0.688
	50	0.719
	52	0.750
	54	0.781
	56 & 58	0.812
	60	0.844
	62	0.875
	64	0.906
	66 & 68	0.938
	70	0.969
	72	1.000

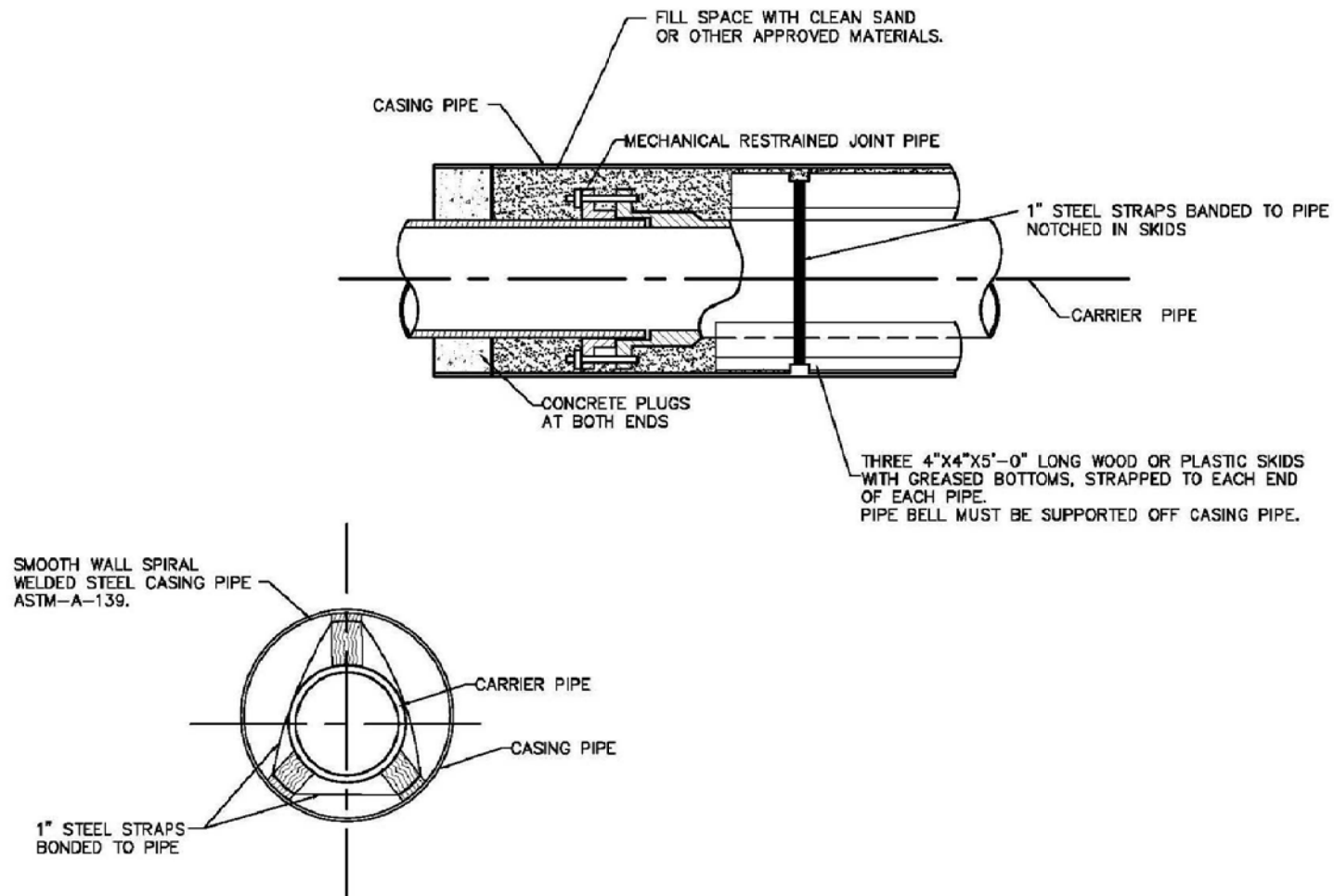


# LOW STRENGTH MORTAR BACKFILL AND BORING/JACKING

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## CASING PIPE DETAIL

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## NOTES

**A.** NO PERSON SHALL DEMOLISH ANY BUILDING OR STRUCTURE WITHOUT FIRST SECURING A PERMIT FROM THE COUNTY BUILDING INSPECTOR. A PERMIT FEE WILL BE REQUIRED OF EACH APPLICANT (SEE ZONING FOR FEE AMOUNT).

**B.** AS A CONDITION OF RECEIVING A DEMOLITION PERMIT, THE OWNER, AGENT OR PERSON IN CONTROL OF A BUILDING OR STRUCTURE TO BE DEMOLISHED SHALL NOTIFY, IN WRITING, THE APPROPRIATE UTILITIES OR PUBLIC AUTHORITIES SERVING THE BUILDING OR STRUCTURE REGARDING THE PERSON'S INTENTIONS TO DEMOLISH THE BUILDING OR STRUCTURE. SUCH NOTICE SHALL INCLUDE A REQUEST THAT THE UTILITIES BE DISCONNECTED WITHIN SEVEN DAYS. THE OWNER, AGENT OR PERSON IN CONTROL OF THE BUILDING OR STRUCTURE TO BE DEMOLISHED, OR THE UTILITY COMPANY, SHALL PROVIDE EVIDENCE TO THE VILLAGE THAT THE UTILITIES HAVE BEEN DISCONNECTED. THE PERMIT WILL NOT BE ISSUED UNTIL ALL PROPER VERIFICATION HAS BEEN RECEIVED. PROOF OF VERIFICATION THAT SERVICES HAVE BEEN DISCONNECTED CAN BE FOUND ON THE APPLICATION FOR A DEMOLITION PERMIT.

**C.** PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT, THE OWNER, AGENT OR PERSON WITH CONTROL OF THE PROPERTY SUBJECT TO DEMOLITION SHALL POST WITH THE VILLAGE A PERFORMANCE BOND, CASH DEPOSIT OR OTHER SURETY APPROVED BY THE PUBLIC WORKS DIRECTOR TO ASSURE THE VILLAGE THAT THE DEMOLITION WORK WILL PROCEED AS PERMITTED. THE VALUE OF THE SURETY SHALL NOT EXCEED THE COST ASSOCIATED WITH THE DEMOLITION AND SITE RESTORATION. THE TERMS OF THE SURETY SHALL PROVIDE THAT THE VILLAGE MAY RETAIN OR CLAIM THE SURETY PROCEEDS IF THE PERMIT HOLDER FAILS TO PERFORM THE DEMOLITION ACTIVITIES IN ACCORDANCE WITH THE PERMIT GRANTED. THE VALUE OF THE SURETY MAY BE REDUCED DURING THE COURSE OF THE DEMOLITION WORK, AT THE SOLE DISCRETION OF THE VILLAGE MANAGER, IF, IN THE ESTIMATION OF THE VILLAGE ADMINISTRATOR, SUFFICIENT SURETY REMAINS TO ASSURE COMPLETION OF THE DEMOLITION AND SITE RESTORATION ACTIVITY.

**D.** DURING THE COURSE OF THE DEMOLITION ACTIVITY, THE OWNER, AGENT OR PERSON IN CONTROL OF THE PROPERTY SUBJECT TO THE DEMOLITION SHALL TAKE STEPS TO ENSURE THE SAFETY OF THE GENERAL PUBLIC. THE PROPOSED STEPS SHALL BE IN COMPLIANCE WITHIN GENERALLY ACCEPTED BUILDING INDUSTRY SAFETY PRACTICES AS MAY BE REFLECTED IN BUILDING CODES APPLICABLE IN THE STATE OF OHIO AND IN STANDARDS OF THE VILLAGE FOR CONSTRUCTION SITE SAFETY MEASURES.

**E.** FOLLOWING THE COMPLETION OF DEMOLITION WORK, THE OWNER, AGENT OR PERSON IN CONTROL OF THE PROPERTY SUBJECT TO THE DEMOLITION ACTIVITY SHALL PROVIDE FOR THE RESTORATION OF THE SITE SO AS TO ADDRESS SAFETY AND NUISANCE CONCERNS.

(1) ALL SUCH SITES SHALL BE BROUGHT TO A LEVEL OR OTHER GRADE DETERMINED TO BE APPROPRIATE BY THE BUILDING INSPECTOR.

(2) ALL SURFACE IRREGULARITIES, WELLS, SEPTIC TANKS, BASEMENTS, CELLARS, SIDEWALKS, VAULTS, OR COAL CHUTES REMAINING AFTER DEMOLITION SHALL BE FILLED WITH COMPACTABLE MATERIALS CONSISTENT WITH CITY STANDARDS.

(3) THE PARTY SECURING THE DEMOLITION PERMIT SHALL PROVIDE FOR THE DISPOSAL OF THE DEBRIS ASSOCIATED WITH THE DEMOLITION AND/OR REHABILITATION WORK. THE DEBRIS MUST BE PLACED IN AN APPROPRIATE CONTAINER FOR REMOVAL BY A PRIVATE CONTRACTOR, OR ANOTHER ARRANGEMENT SHALL BE MADE FOR THE DISPOSAL OF THE DEBRIS ON AT LEAST A WEEKLY BASIS. NO PROPERTY OWNER OR PERMIT HOLDER SHALL PERMIT THE NON-CONTAINERIZED ACCUMULATION OF DEMOLITION DEBRIS ON ANY PROPERTY IN THE VILLAGE FOR A PERIOD IN EXCESS OF SEVEN CALENDAR DAYS. ALL DEBRIS AND MATERIAL ASSOCIATED WITH THE DEMOLITION WORK MUST BE REMOVED FROM THE PROPERTY.

(4) WHEN ONE (1), TWO (2), THREE (3), FROM ABOVE ARE COMPLETED, THE BUILDING INSPECTOR SHALL CHECK FOR ALL WORK AT WHICH TIME THE SURETY BOND WILL BE RELEASED.

(5) ALL SANITARY SEWER LEADS THAT SERVED THE SUBJECT DEMOLISHED BUILDING SHALL HAVE INSPECTION CLEANOUTS WITH PVC PLUGS PROPERLY INSTALLED AND INSPECTED AT THE PROPERTY LINE OF THE PROPERTY. REFER TO VILLAGE STANDARDS 900-9 FOR CLEANOUT DETAILS.

(6) AS SOON AS WEATHER PERMITS, THE SITE SHALL BE PREPARED (INCLUDING THE APPLICATION OF TOPSOIL IF NECESSARY TO ENSURE GROWTH), AND SOD, GRASS SEED OR OTHER GROUND COVER MATERIAL SHALL BE INSTALLED TO ADDRESS SOIL EROSION CONTROL. THE VILLAGE MAY REQUIRE THAT STRAW OR MULCH MATERIAL BE PLACED ON THE SITE THAT IS SEEDED TO PREVENT EROSION AND ENHANCE THE LIKELIHOOD OF SUCCESSFUL GROWTH.

**F.** THE PARTY RECEIVING THE DEMOLITION PERMIT MUST COMPLETE THE DEMOLITION ACTIVITY WITHIN THIRTY CALENDAR DAYS FROM THE RECEIPT OF THE PERMIT. THE TIME LIMIT MAY BE EXTENDED AT THE DISCRETION OF THE BUILDING INSPECTOR. THE PETITIONER MUST PROVIDE EVIDENCE TO SHOW THAT EXTENUATING CIRCUMSTANCES PROHIBITED THE COMPLETION OF THE DEMOLITION WORK IN THE THIRTY-DAY TIME PERIOD.

**G.** PEDESTRIAN PROTECTION SHALL BE PROVIDED FOR ALL DEMOLITION ACTIVITY.

**H.** ENTIRE DEMOLITION SITE MUST BE SECURED FROM THE GENERAL PUBLIC FOR SAFETY REASONS.



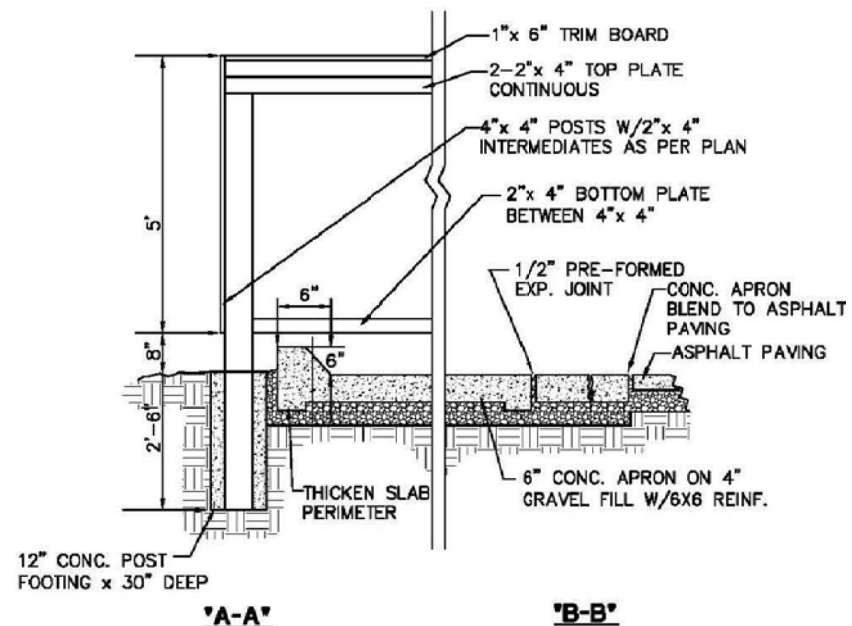
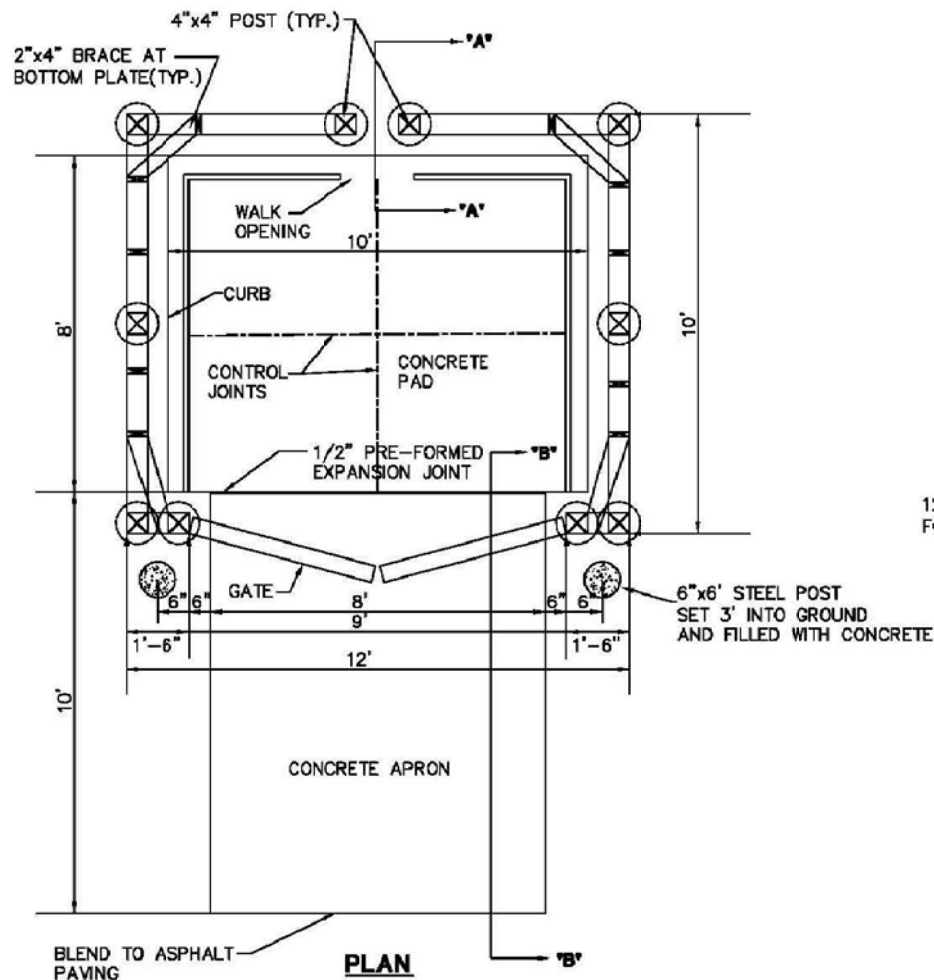
# DEMOLITION PERMIT REGULATIONS

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**NOTES:**

- A.** TRASH CONTAINER TO BE A MAX. OF 2 C.Y. CAPACITY.
- B.** CONTAINER SHALL BE SECURED.
- C.** PLANS TO BE COMPLIED WITH UNLESS OTHERWISE APPROVED.
- D.** ALL DUMPSTERS SHALL BE PROVIDED WITH A DUMPSTER PAD AND A MINIMUM THREE-SIDED 6-FOOT HIGH ENCLOSURE WHICH RESTRICTS THE VIEW OF THE DUMPSTER'S OR DUMPSTERS' CONTAINER ON SITE. A 6 FOOT (MINIMUM) HIGH GATE TO BE INSTALLED ON THE FOURTH SIDE OF ENCLOSURE. GATE TO BE LOCKABLE.
- E.** SEE ZONING CODE FOR PROPER SET BACKS FROM PROPERTY LINE.



# SANITATION ENCLOSURE DETAIL

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## TRAFFIC CONTROL DEVICE NOTES

**A.** ALL TRAFFIC CONTROL DEVICES SHALL BE PER THE LATEST REVISION OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND APPROVED BY THE VILLAGE BEFORE INSTALLATION.

**B.** ALL SIGN POSTS SHALL BE STANDARD STEEL POST UNLESS OTHERWISE APPROVED BY THE VILLAGE.

**C.** ALL STREET NAME SIGNS SHALL BE GREEN IN COLOR WITH WHITE LETTERING UNLESS OTHERWISE APPROVED BY THE VILLAGE.

### STREET SIGNS

THE CONTRACTOR SHALL REMOVE, STORE AND REERECT ALL SIGNS ALONG THE ROADWAY THAT ARE AN OBSTRUCTION FOR THE CURB AND GUTTER CONSTRUCTION. SIGNS WILL BE REERECTED IN THE SAME LOCATION AND CONDITION. ANY DAMAGE TO STREET SIGNS DURING CONSTRUCTION WILL BE REPAIRED AT THE CONTRACTORS EXPENSE. ALL COSTS FOR REMOVING, STORING AND REERECTING STREET SIGNS TO BE INCLUDED IN ITEM 609.

### MAINTAINING TRAFFIC

ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC.

### ON-STREET PARKING

THE CONTRACTOR SHALL PROVIDE FOR ON-STREET PARKING ALONG ONE SIDE OF THE ROAD WHILE CURB AND GUTTER AND DRIVEWAYS ARE BEING CONSTRUCTED. PROPER SIGNS SHALL BE POSTED. COSTS TO BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

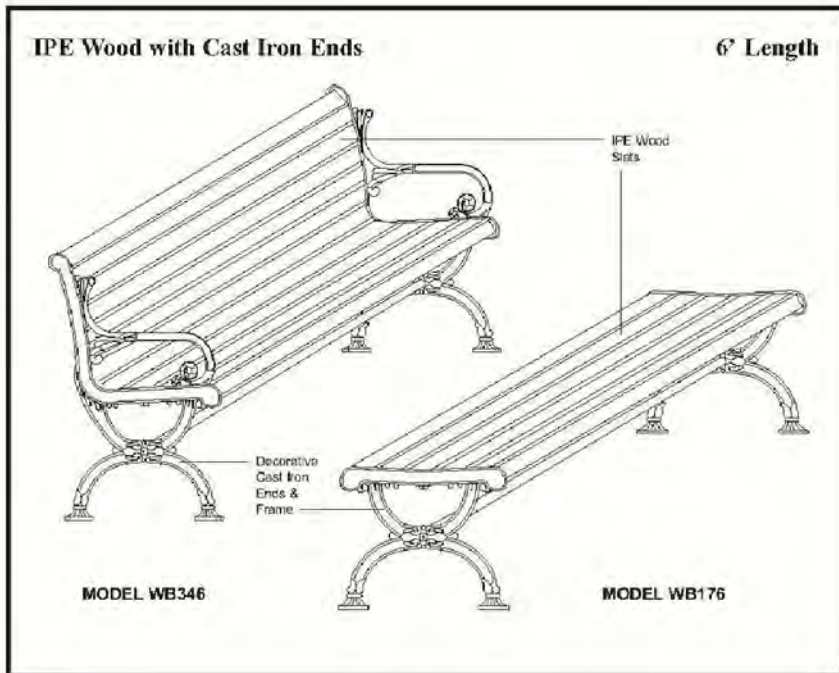


# TRAFFIC CONTROL SIGNALIZATION ROAD SIGN STANDARDS

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### DECORATIVE BENCH

THE BENCH STYLE IS INTENDED TO MATCH THE EXISTING VILLAGE OF JOHNSTOWN BENCHES, AND SHALL BE:

- STERNBERG CHESAPEAKE SERIES (MODEL #WB346)
- UPBEAT SITE FURNISHINGS (MODEL #021-FSC-F3202)
- OR APPROVED EQUAL

SHOP DRAWINGS MUST BE SUBMITTED TO THE VILLAGE FOR REVIEW AT LEAST SEVEN (7 DAYS PRIOR TO ORDERING MATERIALS FOR REVIEW AND APPROVAL.

### DECORATIVE TRASH RECEPTACLE

THE BENCH STYLE IS INTENDED TO MATCH THE EXISTING VILLAGE OF JOHNSTOWN TRASH RECEPTACLES, AND SHALL BE:

- STERNBERG CENTRAL PARK SERIES (MODEL #BT1937 / FLT / BK)
- UPBEAT SITE FURNISHINGS (MODEL #021-FSC-F3202)
- OR APPROVED EQUAL

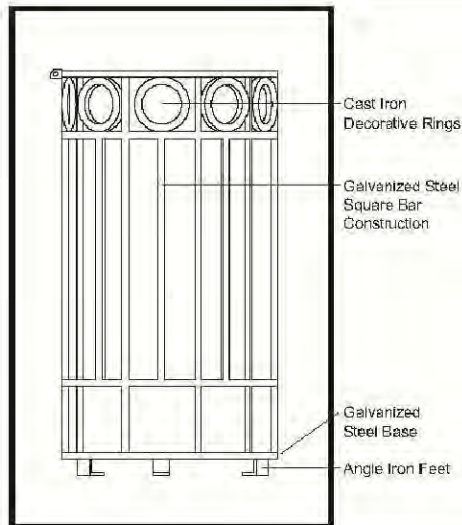
SHOP DRAWINGS MUST BE SUBMITTED TO THE VILLAGE FOR REVIEW AT LEAST SEVEN (7 DAYS PRIOR TO ORDERING MATERIALS FOR REVIEW AND APPROVAL.

### BICYCLE RACK

THE BICYCLE RACK SHALL BE:

- UPBEAT SITE FURNISHINGS (MODEL #021-MDX-GR110-B)
- OR APPROVED EQUAL

SHOP DRAWINGS MUST BE SUBMITTED TO THE VILLAGE FOR REVIEW AT LEAST SEVEN (7 DAYS PRIOR TO ORDERING MATERIALS FOR REVIEW AND APPROVAL.

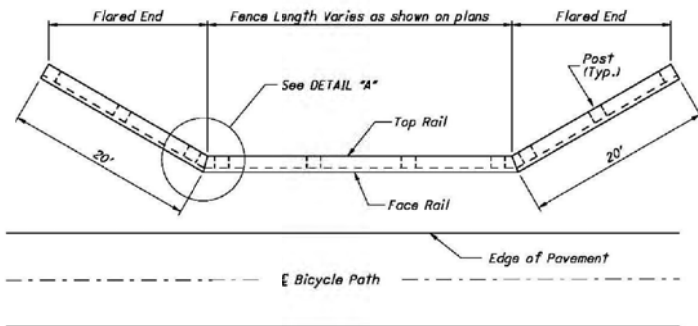
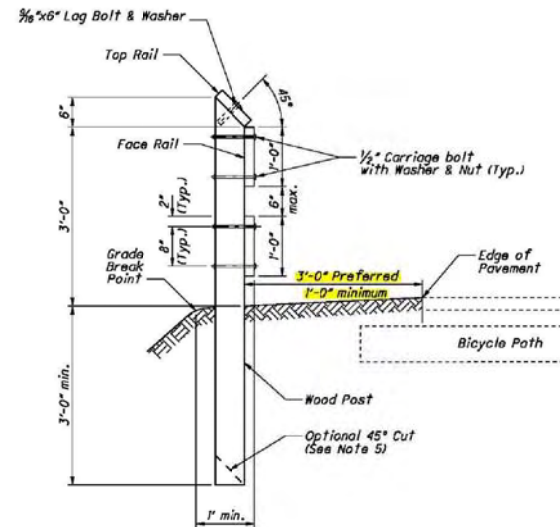
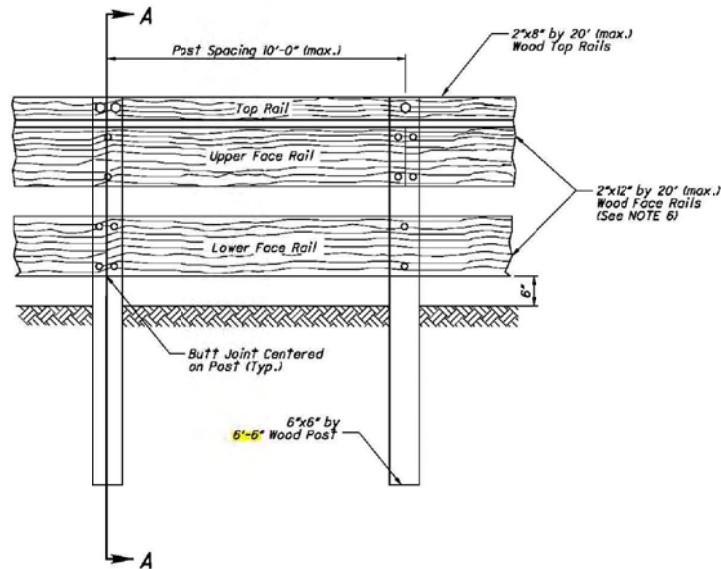


## MISC. DETAILS

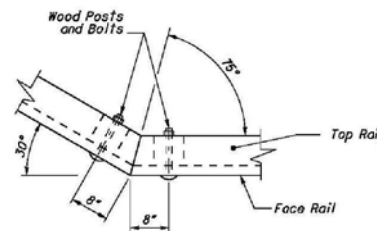
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PLAN VIEW



Lag Bolts in Top Rail are not shown for clarity.

DETAIL "A"

## NOTES

- 1) CCA treat all wood members as specified in CMS 712.06.
- 2) Galvanize all bolts, washers, and nuts as specified in CMS 711.02 and 711.10. Counterbore face of rails to provide flush bolt heads.
- 3) Provide a wood railing that is smooth and splinter free.
- 4) Where less than 1'-0" of graded shoulder width (10:1 or flatter) extends beyond the edge of the face rail, use longer posts so that a minimum 5'-0" embedment depth is provided.
- 5) The bottom end of the 6"x6" posts may be cut to a 45° point.
- 6) Stagger butt ends of the top rail and the lower face rail on alternate posts. Center all butt end joints on the posts.
- 7) Include the cost of furnishing and placing all posts, rails, and hardware in the unit price bid for Item 607 - Fence, Misc.: Wood Fence.



# FENCE

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