

Dimensions and Layout -

footings. Refer to the structural drawings for foundation information 2. All dimensions shown are to edge of pavement or edge of sidewalk unless noted otherwise. 3. Contractor shall verify all dimensions prior to beginning construction.

4. An AutoCAD base plan may be provided to the Contractor for construction purposes upon Codes, Permits, and Bonds -

1. All work shall comply with applicable state, federal, and local codes, and all necessary licenses & permit shall be obtained by the Contractor at his expense unless previously obtained by the owner/developer.

2. Contractor shall obtain all permits prior to beginning construction.

3. The Contractor shall provide for any necessary bonds as required by governing agencies. City and State ROW and Regulations -

1. For the work on the State or City right-of-way, the Contractor shall: a. Not store material, excess dirt or equipment on the shoulders of pavement, or in case of multi-lane highways, in the median strips. The pavement shall be kept free from any mud or excavation waste from trucks or other equipment. On completion of the work all

excess material shall be removed from the ROW. b. Provide all necessary and adequate safety precautions such as signs, flags, lights, barricades and flagmen as required by the local authorities and in accordance with the manual of uniform traffic control devices. The Contractor shall be solely responsible for and hold harmless, the City of Chattanooga and the Owner from any claims for damage

done to existing private property, public utilities, or to the traveling public. c. Complete the work to the satisfaction of the City of Chattanooga and obtain a letter from the appropriate agency stating that the work is acceptable.

2. Post necessary bonds as required by the city and/or state. 3. All work and materials shall comply with the City of Chattanooga regulations and codes of O.S.H.A. Standards. Safety and Clearances -

1. A minimum clearance of two feet shall be maintained between the face of curb and any part of a traffic signal or light pole. 2. Necessary and sufficient barricades, lights, signs and other traffic control measures as may

be necessary for the protection and safety of the public shall be provided and maintained

1. The Contractor shall repair or replace in-kind any damage resulting from his work that occurs to property or items not designated for removal.

throughout the construction period.

rubber-tired vehicle or equipment. The equipment should make at least two passes over each section, with the second pass perpendicular to the first. 3. During proof-rolling of the subgrades, prior to receiving fill, the geotechnical Engineer, or his representative, shall identify any areas of instability. Proof-rolling should not be done after a

period of wet weather to avoid degrading an otherwise acceptable sub-grade. 4. Subgrade stabilization requirements may be refined by the Geotechnical Engineer, subject to

approval of the Project Engineer, during the grading process based on the performance of the subgrades during proof-rolling.

conditions unless otherwise noted. The Contractor shall notify the Engineer of any discrepancies prior to commencement of work, and as soon as noticed during the construction process. 2. The Contractor shall coordinate with the project Engineer for any field grade adjustments

1. Prior to construction the Contractor shall verify existing grades especially within and along

drainage ways. It is the intent of this project for the Contractor to verify and match tie to

needed due to actual topography varying from the topographic survey, or due to any other

3. New finished contours shown are to top of new paving in areas to receive pavement, and to top of topsoil in areas to be seeded or landscaped. Proposed contour intervals are as labeled. All proposed contours are finished grade. 4. Unless otherwise specified, all non-paved or surfaced slopes shall be covered with minimum of 4" topsoil. See Storm Water Pollution Prevention Plan (SWPPP) and landscape plan for

topsoil and permanent seeding areas. All areas to be stabilized per the SWPPP. 5. Unusable excavated materials and all waste resulting from clearing and grubbing shall be disposed of off-site by Contractor. 6. Before any machine work is done, Contractor shall stake out and mark the items established by the site plan. Control points shall be preserved at all times during the course of the

project. Lack of proper working points and grade stakes may require cessation of operations

until such points and grades have been placed to the owner's satisfaction. 7. The Contractor shall insure that positive and adequate drainage is maintained at all times within the project limits. This may include, but not be limited to, replacement or reconstruction of existing drainage structures that have been damaged or removed or reconstructed as required by the Engineer, except for those drainage items shown at specific locations in and having specific pay items in the detailed estimate. No separate payment will

1. Existing embankment slopes in the building areas shall be cut down to lowest grades and then raised in evenly placed and compacted lifts across the entire building pad area. 2. Unstable subgrade materials in the building pad subgrades should be undercut until stable materials are exposed, or a maximum of 1 foot below initial cut or scarified grades. Any areas identified as specified above, shall be stabilized with a geotextile/stone mat, as specified by the Geotechnical Engineer.

3. Unstable materials in parking and drive areas should generally be undercut to stable materials or a maximum of 1 foot below proposed subgrade, at which time the Geotechnical Engineer and the Project Engineer shall evaluate options other than additional undercutting. The Contractor shall proceed upon approval by the Project Engineer only. 4. Loose soil generated from undercutting materials may be re-used as controlled fill upon

approval of the Project Engineer. 5. If unstable soil persists in pavement areas, a woven geotextile such as Geotex 2x2HF, or approved equivalent, shall be used as directed by the Project Engineer. 6. All excavated soils, including possible unsuitable soils, shall remain on site as directed by the Project Engineer. Spoil piles shall be graded and covered with 4" min. topsoil.

1. Backfill of all trenches shall be compacted to minimum density of 95% of Standard Proctor (ASTM D698), in 3 to 4 inch lifts, with moisture content within 3% of optimum depending on the shape of the proctor curve.

2. General fill areas shall be compacted to minimum density of 95% of Standard Proctor (ASTM D698), in 8 inch loose lifts, with moisture content within 3% of optimum. 3. <u>Building pad areas</u> shall be compacted to minimum density of 100% of Standard Proctor (ASTM D698), in maximum 6 inch loose lifts, with moisture content within 3% of optimum and up to 10 feet beyond building limits.

4. Within 1 foot below grade supported slabs and within 2 feet below pavement subgrades, compaction shall be to 100% of Standard Proctor. 5. The edge of compacted fill area shall extend 10 feet beyond the outside edge of buildings, and at least 5 feet beyond the outside edge of pavements before sloping. 6. Backfill material shall be free from roots, stumps, or other foreign debris and shall be placed

date of approval will be the responsibility of the Contractor. 7. All fill material to be utilized on the project shall be free of organic or otherwise deleterious materials and contain no rock fragments larger than 4 inches. On-site soils are generally acceptable for use as engineered fill, subject to approval of the Geotechnical Engineer for

at or near optimum moisture. Correction of any trench settlement within a year from the

 $\underline{\text{coordinating the testing to limit the time/expense of the compaction testing.}}$ Sewer and Drainage -1. Existing drainage structures are to be inspected, repaired as needed and cleaned out to

remove all silt and debris. 2. All curb gutters are to be cleaned to provide proper drainage. 3. All pipe lengths & distances between structures are measured from center of structure to

center of structure along a horizontal plane. 4. The Contractor shall provide all the materials & appurtenances necessary for the complete installation of the storm drainage, sewer, water and utility systems. All pipe & fittings shall be inspected by the utility department inspector prior to being covered. 5. All concrete for sewer and drainage systems shall have a minimum 28-day compressive strength of 3000 psi unless otherwise noted.

1. These drawings do not purport to locate all utilities. 2. All utility locations to be field verified by proper agencies before beginning construction.

Underground utilities are not field located nor are all purported to be shown. Information shown should be considered approximate. Contractor to contact all utility companies to have utilities field located before excavation or demolition work begins. . The locations of existing underground utilities shown have not been independently verified by the owner or its representative. The Contractor shall determine the exact location of all existing utilities within the working area before commencing work and agrees to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all underground utilities. 4. The Contractor shall coordinate location & installation of all underground utilities and

appurtenances to minimize disturbing curb & gutter, paving, existing utilities & compacted sub-grade, and shall coordinate all work with other utility installations not covered in these plans. (Electric, telephone, gas, cable, etc.& allow for their operations & construction to be 5. The Contractor shall make arrangements with the local utility authorities for connection to the existing mains & pay all applicable fees.

6. Utility coordination & costs shall be included in the project schedule & it is the explicit responsibility of the Contractor to assure that the project schedule includes any necessary relocation. The Contractor will not be paid additionally for this coordination. The Contractor should seek assistance from all utility companies to locate & protect their facilities. 7. Contractor shall notify and cooperate with all utility companies or firms having facilities on or

joint spacing shall be approximately 50 feet. 4. Concrete shall be treated with curing product as specified immediately upon placement and surface finishing, per manufacturer's recommendations.

1. A qualified soils testing laboratory shall determine the suitability of the existing sub-grade

and existing on-site or borrow material prior to beginning any filling operation. 2. The Contractor shall provide any excavation and material samples necessary to conduct required soil and concrete tests. All arrangements and scheduling for the testing shall be the Contractor's responsibility.

Project Closeout Documentation-Prior to final acceptance by the Owner/City Engineer and/or issuance of any Certificate of

Occupancy, the Contractor shall:

1. Submit an inventory of the constructed stormwater drainage system, whether public or private, to the City of Chattanooga in electronic format. Electronic As-Built drawings shall be submitted in AutoCAD and .pdf format, and shall show plainly the approved and constructed layout of the stormwater systems. The as-built drawing shall include all stormwater features, whether new or existing, including the outfall to the City drainage system (ex: catch basins, conduits, hydrologic features including ponds, streams, culvert inlets and outfalls, and all

As-built drawings and certifications of all stormwater and green infrastructure shall be accompanied by as-built photos made during the survey/inspection during the various phases of construction.

pervious surfaces, etc.). See Specification Section 01 78 00 Closeout Submittals for details.

2. Comply with all permanent landscaping requirements, and shall schedule a landscape inspection with the City's Landscape Architect, Ms. Karna Levitt, RLA at 423-643-5885.

3. Contractor shall notify Surveyor & City Stormwater Inspector at least 48 hours prior to any cover placed on underground systems.

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142 N Market Street P.O. Box 4048 Chattanooga . TN . 37405 v: 423.266.1207 f: 423.266.1216



passpointe ENGINEERING

2719 Hickory Valley Road, Suite B Chattanooga, TN 37421 423-451-6601 janpass@passpointe.com



Fire Station No. 5

for the

Chattanooga Fire Department Contract No. F-14-002-201

2009 Vance Avenue Chattanooga, TN 37404

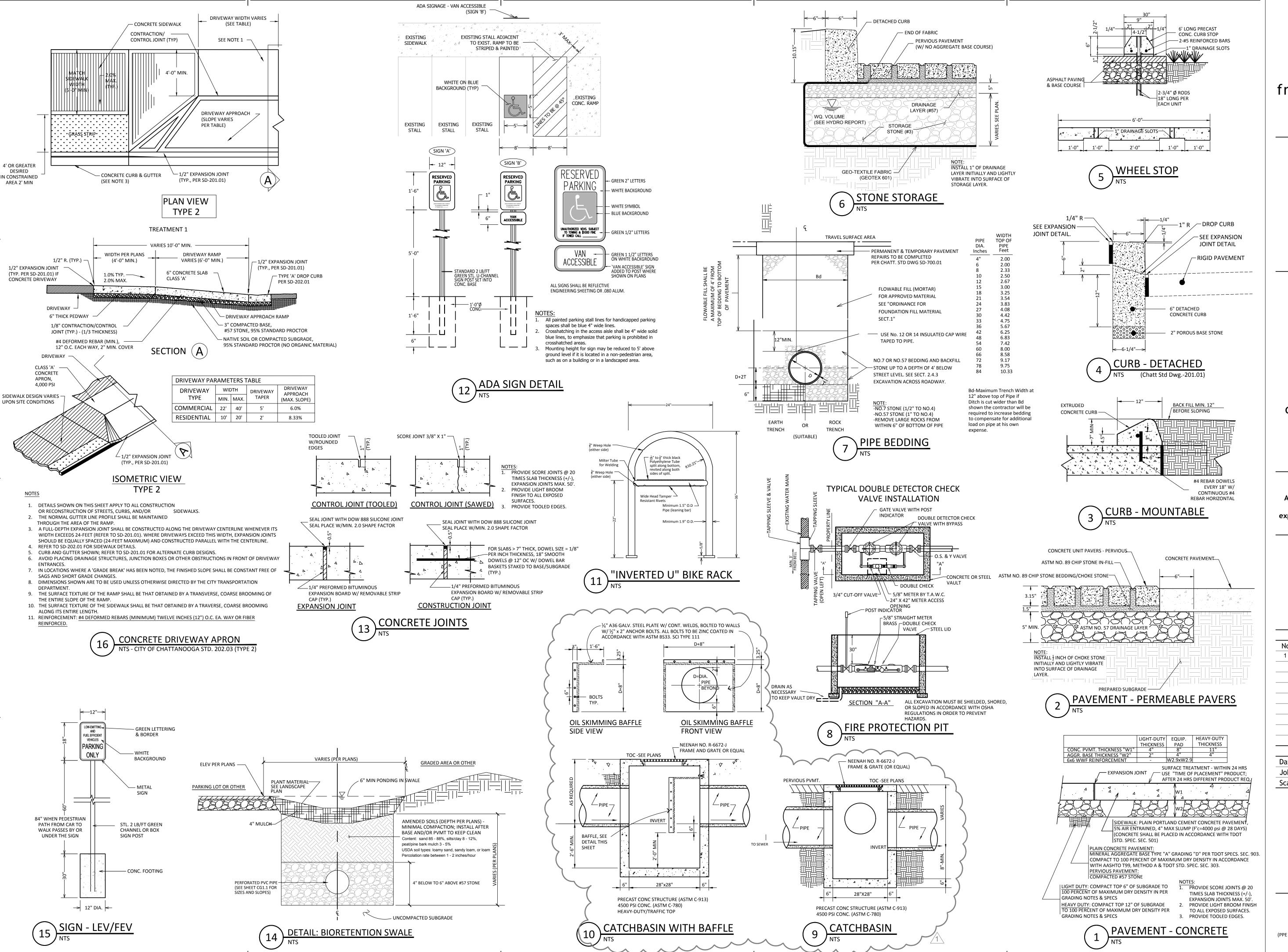
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	Revisions	
No.	Issue	Date
1	Pipes, ports, protection, notes	12/12/16

	Sheet Information	
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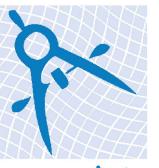
Civil **Grading Plan**





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		Revisions
۱о.	Issue	Date
1	Revised Catchbasin Dtls 9 & 10	12/12/16

	Sheet Information
Date	30 September 2016
Job No.	6750
Scale	None

Civil

Details

Sheet

CG2.0