

CONSTRUCTION NOTES

GENERAL

- 1. The CONTRACTOR shall be responsible for being familiar with, and having a working knowledge of these plans, construction notes, the project area, and all codes, regulations or laws applicable to the project.
2. All construction shall conform to the requirements of the "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" by North Central Texas Council of Governments (NCTCOG) most recent amendment.
3. The CONTRACTOR shall provide "As Built" plans to the CITY ENGINEER so that the reproducible sheets of the engineering plans may be corrected to reflect "as-built" conditions, as necessary.
4. The OWNER shall designate a staging area. The CONTRACTOR shall not stockpile materials or supplies nor park or store equipment or vehicles or any other item at any location without the written permission of the CITY ENGINEER and the OWNER.
5. The CONTRACTOR shall not allow soils and debris to enter existing inlets. All inlets shall be protected during construction. The CONTRACTOR shall maintain adequate drainage at all times. Care shall be taken not to block gutters, alleys, inlets, or swales during the course of the project.
6. The CONTRACTOR shall limit his work to the R.O.W. or Easements shown on the drawings. All disturbed/damaged areas outside the construction limits shall be repaired and/or replaced at the CONTRACTOR'S expense as needed to restore the area to a condition equal to or better than that which existed prior to the start of the work.
7. Any water that may accumulate in excavations during the progress of the work shall be removed promptly. All excavations shall be kept entirely free of standing water at all times during the construction work or until otherwise directed by the City. The costs associated with this requirement shall be subsidiary to other items of the project.
8. The CONTRACTOR shall not dispose wastes or any other materials into streams or waterways. Excess material shall be hauled away each day and not be allowed to accumulate.
9. The CONTRACTOR shall not burn or bury rubbish and waste materials on the project site.
10. The CONTRACTOR shall wet down dry materials to allay dust and prevent blowing dust.
11. The CONTRACTOR shall smooth trowel all placed concrete and provide a "broom" finish unless noted otherwise. All concrete shall be class 'C' 3600 PSI, unless noted otherwise.
12. All dimensions shown on the plans are to the centerline of pipe, ditch or channel, or the face of curb as appropriate, unless noted otherwise.
13. The CONTRACTOR shall be responsible for notifying the CITY ENGINEER, the Traffic Engineer, the Police and Fire Departments at least 24 hours in advance when any roadway will be closed or reopened.
14. The CONTRACTOR shall be required to provide and maintain all necessary warning and safety devices (flashing lights, barricades, signs, etc. in conformance with the "Texas Manual on Uniform Traffic Control") to protect public safety and health until the work has been completed by the CONTRACTOR and accepted by the OWNER and the CITY.
15. The locations of existing utilities shown on these plans are approximate. It is the responsibility of the CONTRACTOR to locate and verify in the field any utilities that may conflict with the proposed construction. At least 48 hours prior to beginning construction in the vicinity of existing underground utilities, the CONTRACTOR shall notify the following, as applicable:
City of Addison 972-450-7001
Development Services Department 972-450-2880
Public Works Department 972-450-2871
Line Location Service 800-817-8090
16. The CONTRACTOR shall exercise an abundance of caution while working near all utilities, especially around power lines (overhead and underground) and gas lines due to the dangers associated therewith. It is the responsibility of the CONTRACTOR to assure that all work associated with this project is in compliance with all pertinent codes and regulations and that public safety is protected throughout the course of the project.
17. The CONTRACTOR must have a set of plans "Approved" by the Engineering Department on this project at all times.
18. Product Manufacturer's name(s) and/or model numbers are used herein to set a standard of quality and are not intended to be a restraint of trade or prevent submittals of other manufacturers products of equal quality, color, function or design, for products so mentioned. When substitution of a specified product is desired, CONTRACTOR shall notify ENGINEER by written request. The request shall be accompanied by shop drawings, specifications, samples, test results, and/or other documentation as may be reasonable and necessary for ENGINEER to determine the suitability of the proposed product for the one specified. The ENGINEER'S shall have sole discretion in determining whether to allow or prohibit any or all substitutions.
19. Existing regulatory signs and street designation signs within the construction limits shall be relocated by the CONTRACTOR as directed by the CITY ENGINEER. Cost of relocation shall be subsidiary to other items of the project.
20. Adequate access into and out of the area streets and adjacent driveways shall be maintained at all times during construction.

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CONCRETE

- 1. Unless otherwise specified, concrete shall be of hard rock aggregate and shall develop a minimum compressive strength of 3,600 psi at 28 days.
2. Concrete shall have a maximum slump of four (4) inches. A water/cement ratio of 0.5 shall not be exceeded to arrive at an acceptable slump for workability purposes.
3. All concrete shall be designed, mixed, transported, and placed in accordance with the latest specifications of the American Concrete Institute.
4. Maximum size of coarse aggregate shall be 1 1/2". The use of fly ash is prohibited. CONTRACTOR shall obtain ENGINEER'S written approval for any batch design, prior to scheduling concrete delivery.

REINFORCING STEEL

- 1. All beam stirrups and #3 bars shall, at a minimum, conform to ASTM Specifications A615, Grade 40. All other reinforcing steel shall conform to ASTM A615, Grade 60. Foreign steel is acceptable if mill certificates showing compliance with ASTM are provided.
2. All reinforcement shall be designed and detailed in accordance with the latest edition of the ACI "Manual of Standard Practice for Detailing Concrete Structures" (ACI 315).
3. Hook the ends of all discontinuous bars.
4. All hooks shall be ACI Standard 90 degree hooks unless detailed otherwise.
5. All reinforcing bar bands shall be made cold.
6. Reinforcement shall be supported to provide the following minimum concrete cover:
Cast against and permanently exposed to earth 3 in.
Formed, exposed to earth or weather 2 in.

GRADING

- 1. All vegetation and debris shall be removed from areas to be graded, prior to commencing with excavation or filling.
2. The ditches and road subgrade shall be constructed to the grades shown on the plans. Where unscalable subsurface material is found (such as trash, debris or organic material or as evidenced by sponginess or pumping) the area shall be over-excavated and backfilled with acceptable native material.
3. All fills shall be placed in lifts of 6 to 8 inches. Each lift shall be compacted to 95 % standard proctor density prior to placement of subsequent lifts. Material for fills shall be obtained from excavation of ditches, provided that such material is suitable.
4. All debris, deleterious materials, and/or excavated soils shall be disposed of properly offsite and out of floodplain and not be allowed to accumulate. Disposal of such material shall not be allowed in streams, waterways, drainage ways, drainage facilities, or public or private lands except where proper permitting has been obtained. Excess excavation shall be properly disposed of offsite and out of floodplain.
5. The CONTRACTOR shall maintain adequate drainage at all times. Water shall not be allowed to accumulate or remain in excavations.

STORM SEWER

- 1. All storm sewer pipe shall be reinforced concrete pipe, Class III, unless noted otherwise. Embedment, backfill and compaction is subsidiary to pipe installation.
2. The CONTRACTOR shall install proposed storm pipe of the size and types specified (or approved equal) to the lines and grades shown on the plans.
3. Sanitary sewers which are within 2 feet of the proposed storm drain structures (measured from outside of pipe to outside of pipe), shall be encased in concrete (2000 psi) for a distance of five feet on both sides of the centerline of the crossing.

DRIVEWAY ENTRY PAVING

- 1. The driveway entry as identified on the plans, shall be composed of 8" thick, 3,600 psi, reinforced concrete pavement. The subgrade shall consist of smooth graded native material, set to the grades shown on the plans. The subgrade shall be established by filling the area below the proposed pavement to a depth of 6 inches and re-compacting to a minimum density of 95% standard proctor.
2. The pavement may be constructed monolithically although construction joints are permissible for convenience. Construction joints shall be vertical and shall be keyed to the next pour with a vertical 2" X 4" key.
3. Dummy joints shall be sawed transversely at intervals.
4. The cost of elevation adjustment of manholes, valv subsidiary to the other items of the project. All meter the CONTRACTOR so that they may be easily relocate placing the concrete for pavement.
5. The existing concrete shall be clean and free of debris prior to beginning paving with new concrete.
6. The CONTRACTOR shall submit batch designs (for asphalt) to the ENGINEER for approval prior to beginning paving operations.

WATER

- 1. All water main construction shall conform to the minimum requirements of the TNRCC Rules and Regulations for public water and sewer systems.
2. Acceptable water main sizes shall be 6" and larger. Water mains less than 6" diameter will not be permitted; nor will 10" diameter water pipe.
3. All water mains 8" or less shall be Class 200, AWWA C900 P.V.C. water Pipe with B+ embedment unless noted otherwise. Pipe color shall be blue.
4. All 12" water mains shall be Class 150 (unless specified otherwise), AWWA C900 P.V.C. water pipe or AWWA C303 RCCP with B-1 embedment unless noted otherwise. Pipe color shall be blue.
5. All water mains larger than 12" shall be AWWA C303 pretensioned concrete cylinder water pipe or AWWA C900 PVC (CL150) water pipe with B-1 embedment unless noted otherwise. (blue in color)
6. All 6" through 12" valves shall be Mueller Resilient Seat Gate Valves (A-2370-series) or approved equal.
7. All 16" and larger valves shall be Mueller Lineless III Butterfly Valves (B-3211-series-0024) or approved equal.
8. The following firehydrants are approved for use:
1) Mueller Centurion - Model A-423
2) M&H Model 529 with epoxy coated shoe
3) Waterous Pacer 100
4) American Darling (Model# B-84B)
5) Clow Corporation - Medallion
9. Hose/pumper nozzles on fire hydrants shall be 18" above the top of curb, or finished grade, and shall face the streets or firelane. Fire hydrant shall be placed not less than 3' nor more than 6' behind the curb.
10. All tapping sleeves shall be Mueller or approved equal.
11. All water mains shall have a minimum cover of 48" below finished grades.
12. All water mains shall be pressure tested in accordance with the NCTCOG Specifications. THE CONTRACTOR shall flush and sterilize all water mains. THE CITY will take water samples and have laboratory tests performed to prove the water mains to be free of bacteria/micro-organisms.

ALL FITTINGS SHALL HAVE "MEGA-LUGS".

SANITARY SEWER

- 1. All sanitary sewer mains 15" or less shall be ASTM D3034-SDR35 P.V.C. gravity sewer pipe with B+ embedment unless noted otherwise. Pipe color shall be green.
2. All sanitary sewer mains 18" to 27" shall be ASTM F679 (TYPE 1) SDR35 P.V.C. gravity sewer pipe with B-1 embedment unless noted otherwise. Pipe color shall be green.
3. All sanitary sewer mains larger than 27" shall be RCP ASTM C76 of minimum strength Class III with B-1 embedment unless noted otherwise. All joints to be rubber Q-ring gasket type conforming to ASTM C443.
4. All sanitary sewers shall be air tested in accordance with the NCTCOG Specifications.
5. All sanitary sewers shall be televised and a video tape shall be made and furnished to the city.
6. All sanitary sewer service laterals shall be Schedule 40 poly vinyl chloride (PVC) pipe.

TRENCHES

- 1. The CONTRACTOR shall institute and, throughout the course of this project, maintain a trench safety program as called for by the specifications.
2. The maximum length of open excavation for trenches shall be limited to 100 lineal feet regardless of depth. All trenches shall be backfilled at the end of each day.
3. Areas which have been backfilled to comply with the requirements of paragraph #2, above, but have not been properly compacted, shall be promptly removed at the start of the next working day and compacted to the specified densities.

EMBEDMENT

- 1. Embedment (NCTCOG item 6.2.9.) of storm sewer pipe and laterals under pavement or subject to vehicular traffic, shall be Class "B". Select (or granular) material above the crushed stone shall be compacted to a minimum of 90 percent of maximum density as determined by ASTM D 698.
2. Embedment of storm sewer pipe not under pavement or subject to vehicular traffic shall be Class "C".
3. All water and sewer lines which may be adjusted, shall receive Class "B-1" embedment except where concrete encasement is specified.

BACKFILL

- 1. Backfill under pavement shall have a uniform density of not less than 95 % of the maximum density as determined by ASTM D698. Backfill not under pavement shall have a uniform density of not less than 90 % of the maximum density as determined by ASTM D698.
2. Backfilling shall be accomplished using friable native (excavated) material free of boulders, organic material, trash and debris. Soft spots shall be excavated and backfilled with suitable fill material. All backfill shall be placed in 6 to 8 inch lifts each compacted to specified densities.

ROCK RIP-RAP

- 1. Rock rip-rap shall consist of a well graded mix of stones between maximum particle size and 50 % of the maximum particle diameter. A minimum of 60 % of the volume of the rock shall be composed of rocks of the maximum particle size.
2. Areas to be rip-rapped shall be smooth graded and be free of debris or loose soils. The area shall be overlain with a geotextile fabric such as Mirafi 700x or approved equal.
3. Rock rip-rap erosion protection shall be placed at locations indicated on the plans for the purpose of providing protection against erosion at the outlets of drainage features. Rip-rap shall consist of stones 4" to 6" in diameter no less than 15" deep. The interstitial spaces in the rock beds shall be filled with native clay materials and compacted.

GRASS

- 1. Areas to grassed shall be hydromulched using hulled Bermuda grass if seeding is to occur between May 15 and September 15. Winter Rye grass shall be used if seeding is to occur between September 15 and May 15. Application rates, fertilizer and watering shall be according to the supplier's recommendations.
2. All turf areas disturbed by work shall be aerated to a depth of six (6) inches, smooth graded and hydromulched as indicated in item 1, above. Payment shall be made for work required inside grading limits and construction limits as shown on plans. All turf areas disturbed outside these limits shall be the responsibility of the CONTRACTOR and shall be repaired by aerating to a depth of six (6) inches, smooth grading and hydromulching as indicated in item 1, above.
3. Hydromulched areas shall be thoroughly watered within 30 minutes of placement. Watering shall be maintained through the first mowing, at intervals and amounts recommended by the supplier. The project will not be accepted until all graded, disturbed and repaired areas have a substantial stand of grass.

TREES

- 1. The CONTRACTOR shall exercise caution during all phases of the project to protect existing trees and shrubs.
2. Earthfill, stockpiling of materials, vehicular parking, and excessive foot or vehicular traffic shall not be allowed within the drip line of vegetation designated to remain in place. Vegetation damaged by any of these or similar actions shall be replaced with viable vegetation of the same species, similar condition, and like size unless otherwise approved by the OWNER.
3. Any cuts, skins, scrapes or bruises to the bark of the vegetation shall be carefully trimmed and local nursery accepted procedures utilized to seal damaged bark.
4. Any limbs or branches one-half (1/2) inch or greater in diameter which are broken, severed or otherwise seriously damaged during construction shall be cut off at the base of the damaged limb or branch flush with the adjacent limb or tree trunk.
5. All roots one (1) inch or greater in diameter which are cut, broken or otherwise severed during construction operations shall have the end smoothly cut perpendicular to the root. Roots exposed during excavation or other operations shall be covered with moist earth and/or backfilled as soon as possible to prevent the roots from drying out.

EROSION PROTECTION DURING CONSTRUCTION

- 1. Erosion Control Devices as shown for the project shall be installed prior to the start of land disturbing activities.
2. All erosion control devices are to be installed in accordance with the approved plans and specifications for the project. CONTRACTOR may construct stabilized construction entrances at alternate locations if needed. However, changes are to be approved by the CITY ENGINEER and the OWNER prior to the start of construction.
3. If the approved erosion control plan proves to be ineffective in controlling erosion and off-site sedimentation from the project, the erosion control plan will be required to be revised.
4. If off-site soil borrow or spoil sites are used in conjunction with this project, this information shall be disclosed and shown on the erosion control plan. Off-site borrow and spoil areas are considered a part of the project site and therefore shall comply with the City of Grand Prairie erosion control requirements. These areas shall be stabilized with permanent ground cover prior to final approval of the project.
5. CONTRACTOR shall be responsible for seeding areas disturbed by grading at the completion of construction.

WE DON'T ACKNOWLEDGE CITY OF G.P. REQUIREMENTS!

doesn't apply here!

shouldn't this be horizontal? manholes and water meters shall be adjusted shall be cross-referenced to adjustments shall be completed prior to

use rock where this applies!

what size

90%

Most of this doesn't apply to this project. The rip-rap is already on site & is bid in the plans.

How?

DESIGNED BY: O.E.I.
NOTES AND REVISIONS:

SEAL FOR REVIEW ONLY
ISSUED: 1/14/03
THIS DOCUMENT IS FOR REVIEW ONLY AND NOT INTENDED FOR BIDDING, CONSTRUCTION, OR PERMIT PURPOSES. IT WAS PREPARED BY, OR UNDER THE DIRECT SUPERVISION OF:
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T.F. STONE COMPANIES INC.
T.F. STONE BUILDING
LOT 1, BLOCK A, ADDISON STORAGE ADDITION
GENERAL NOTES
ADDISON, DALLAS COUNTY, TEXAS

DATE: 1/14/03
O.E. JOB NO. 138-02
SHEET NO. 8
OF 9 SHEETS