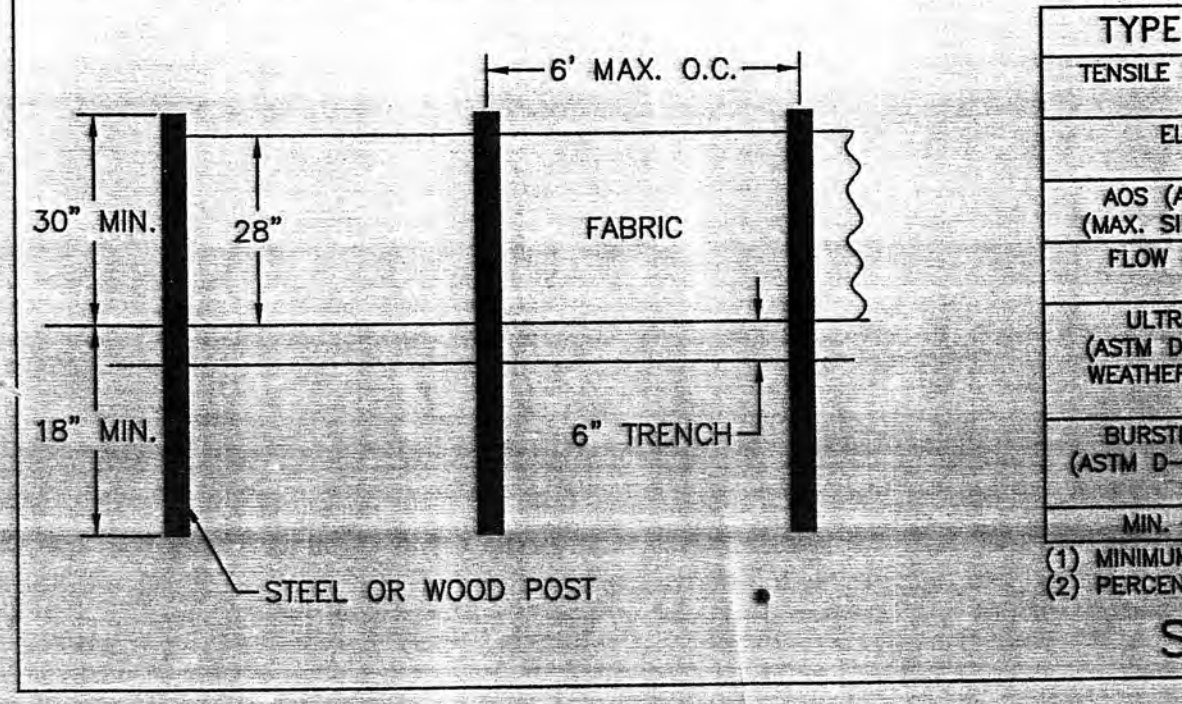
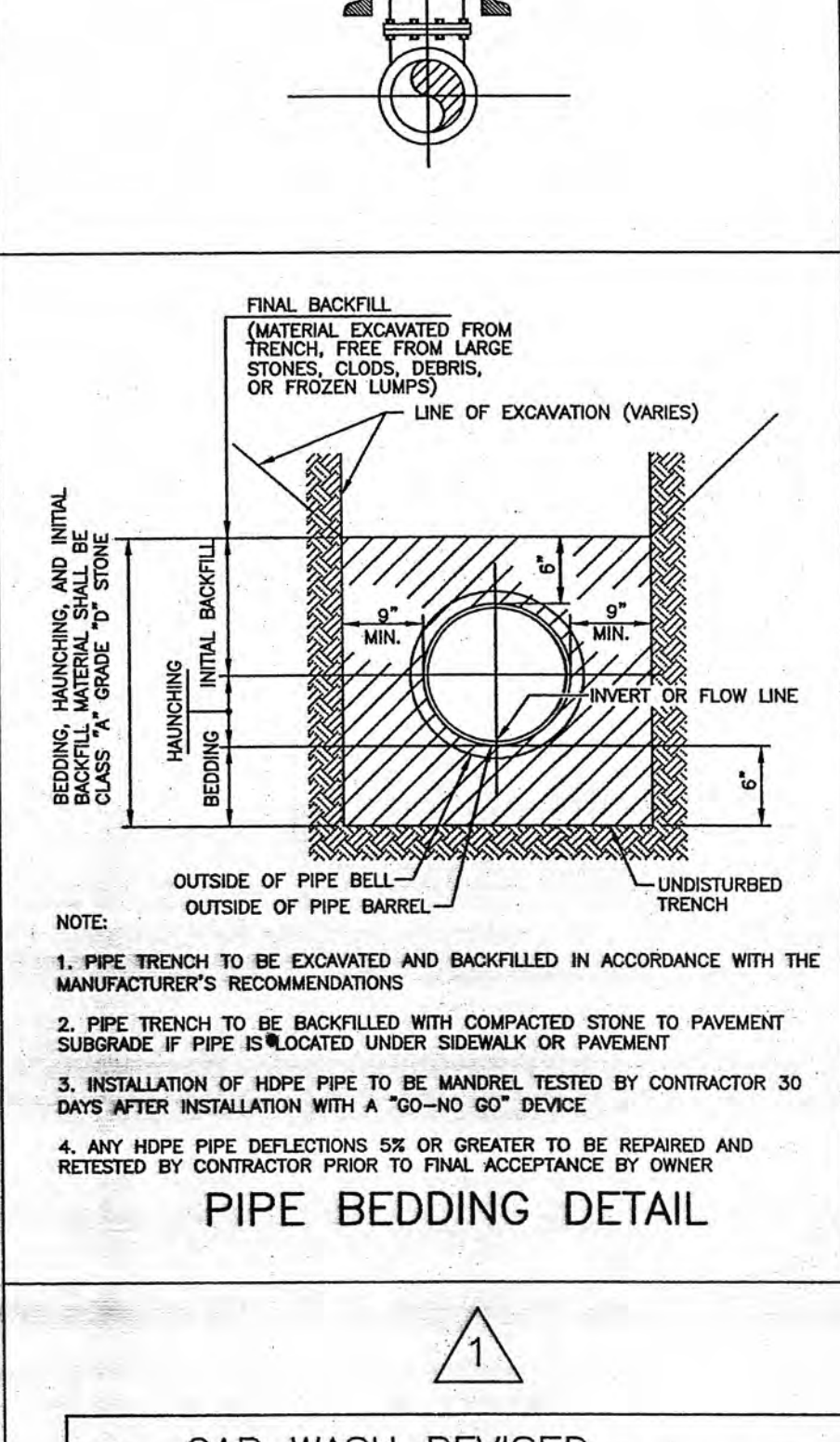
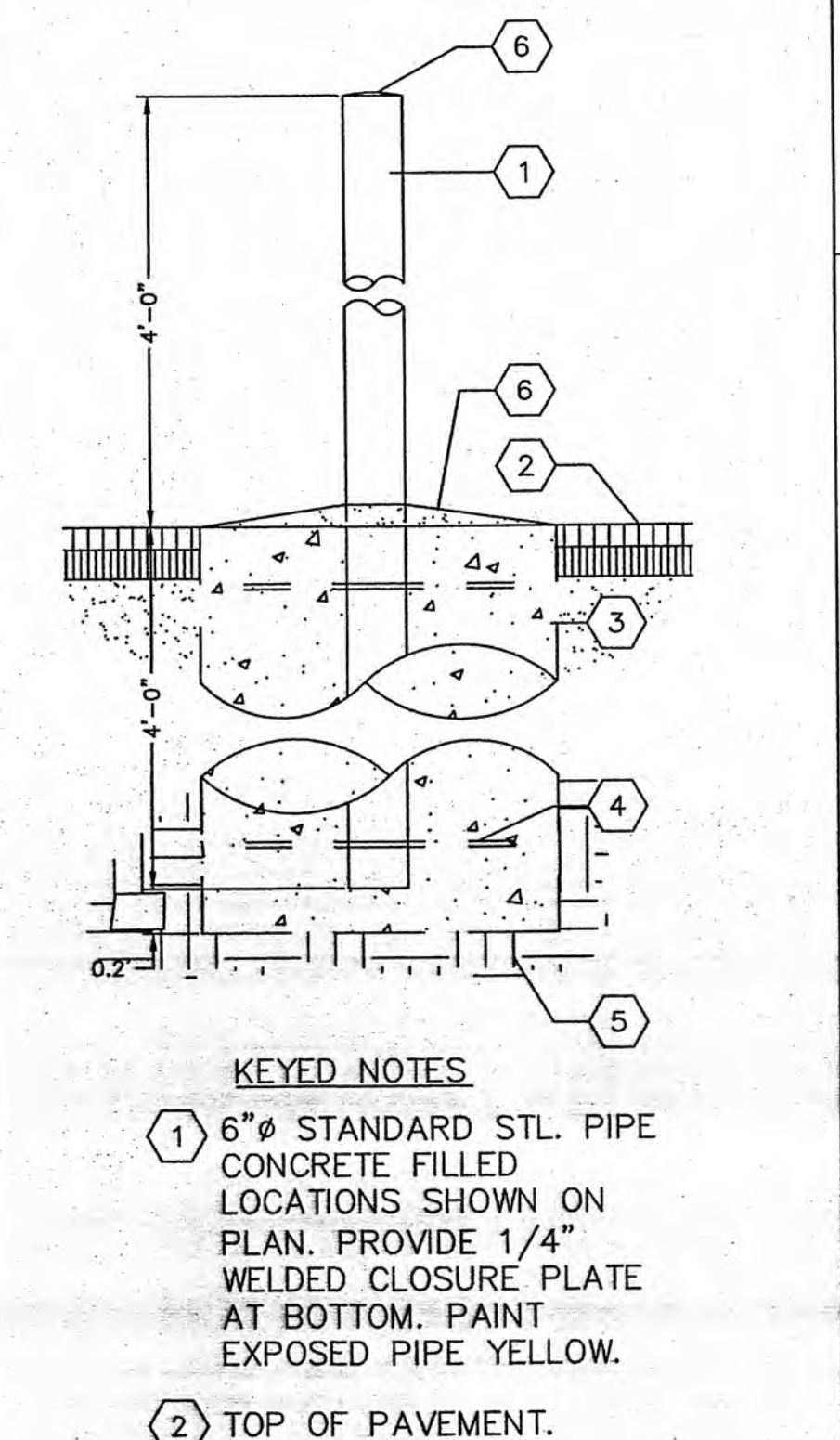
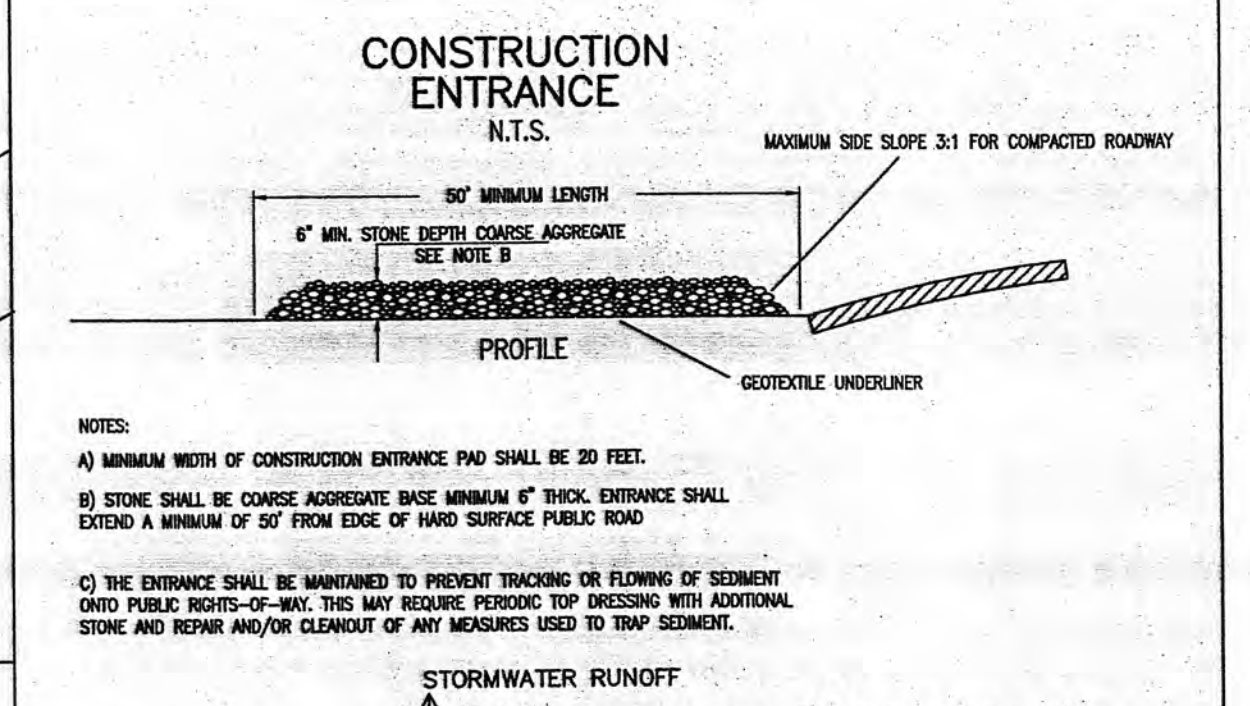
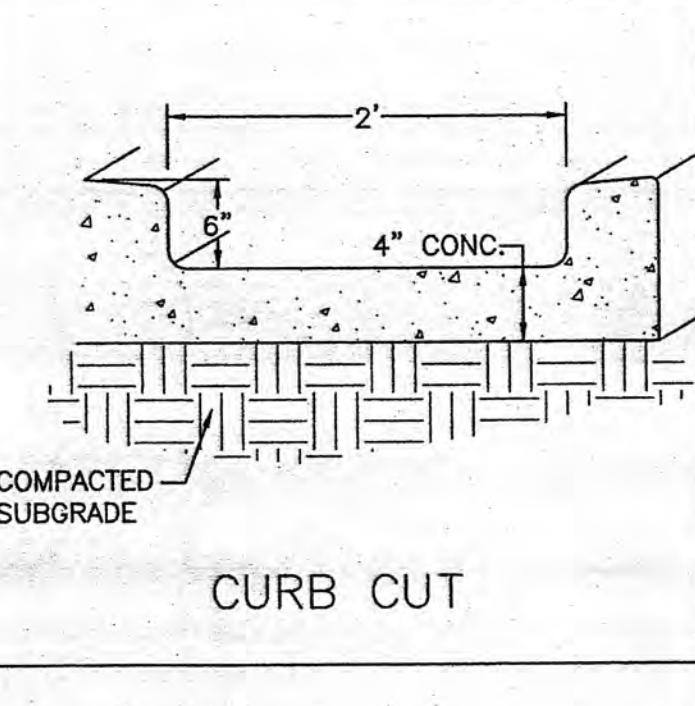
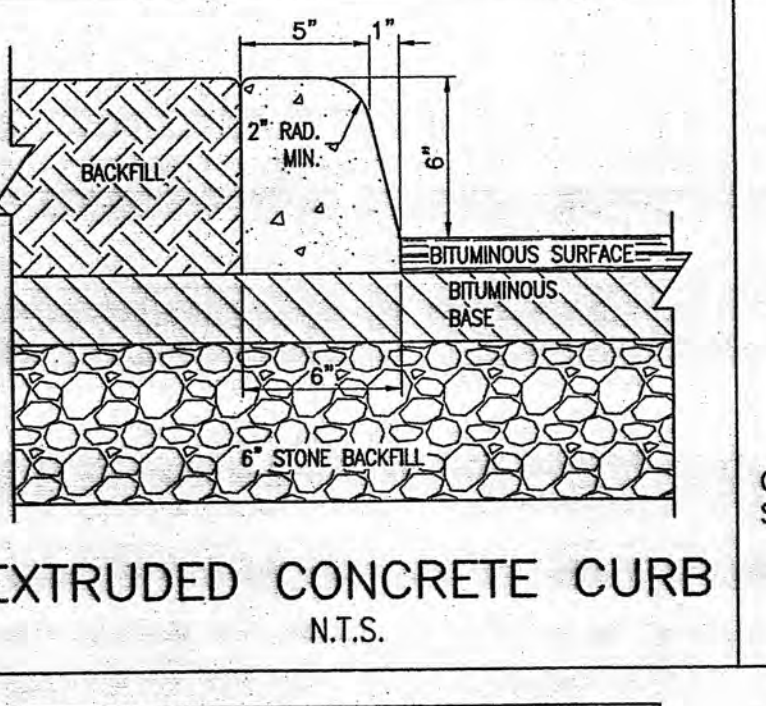
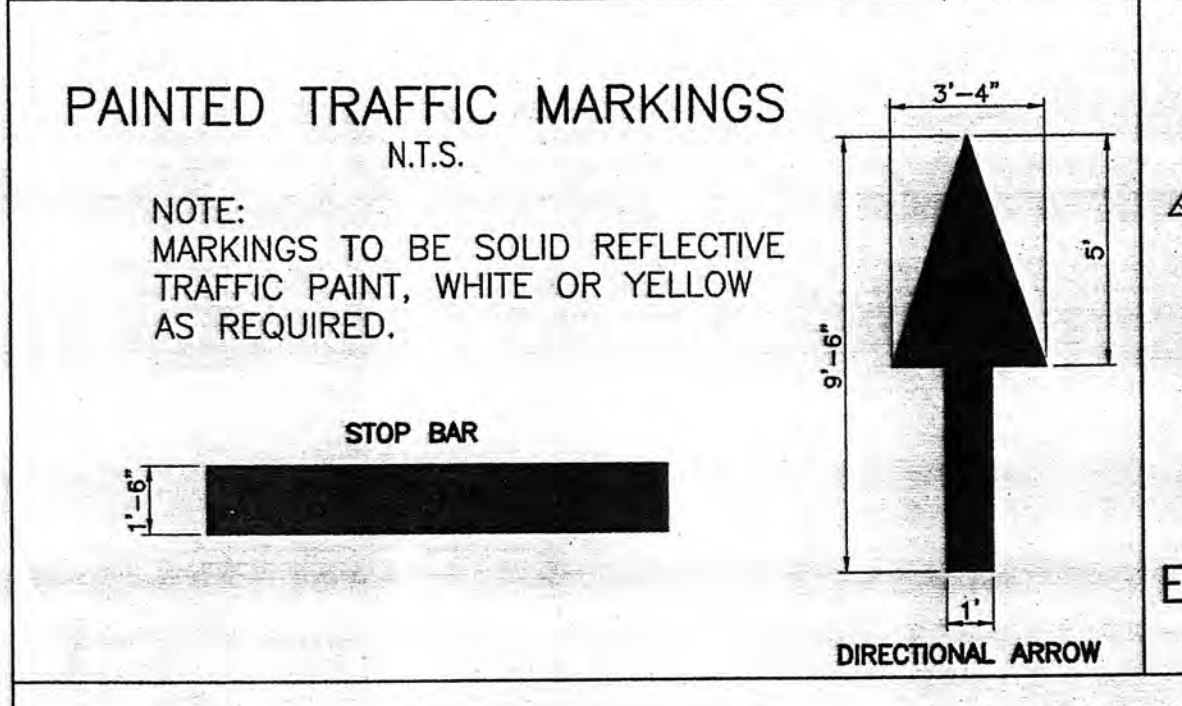
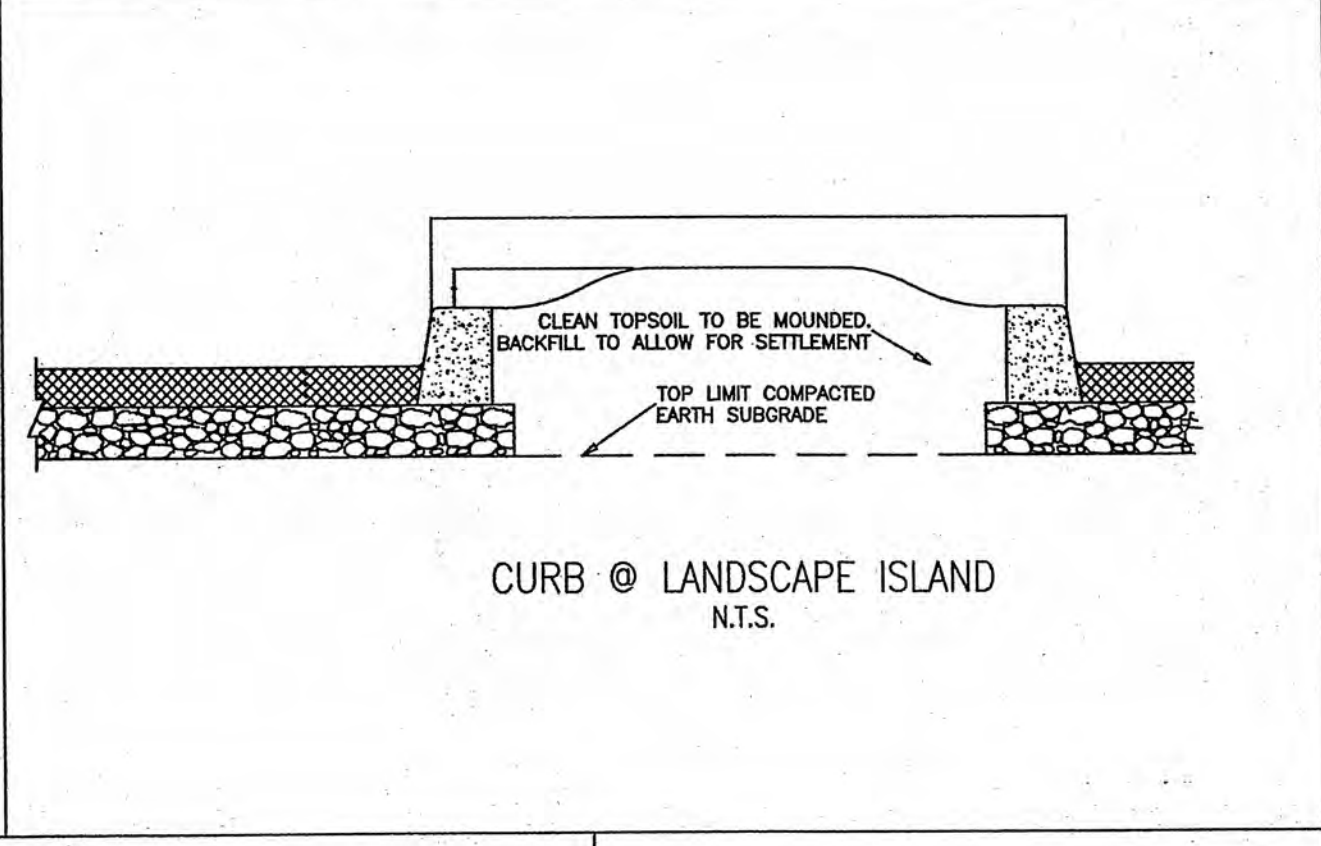
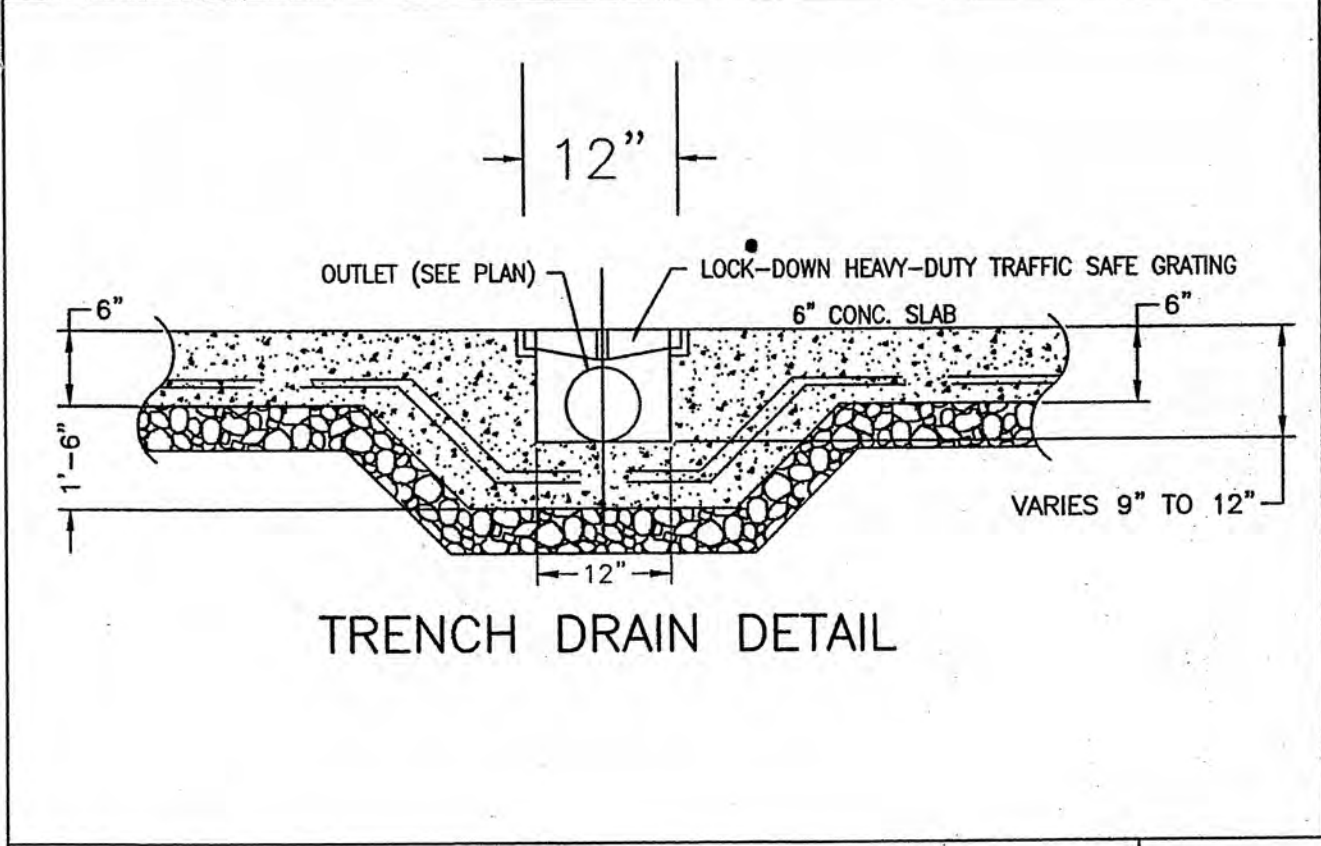
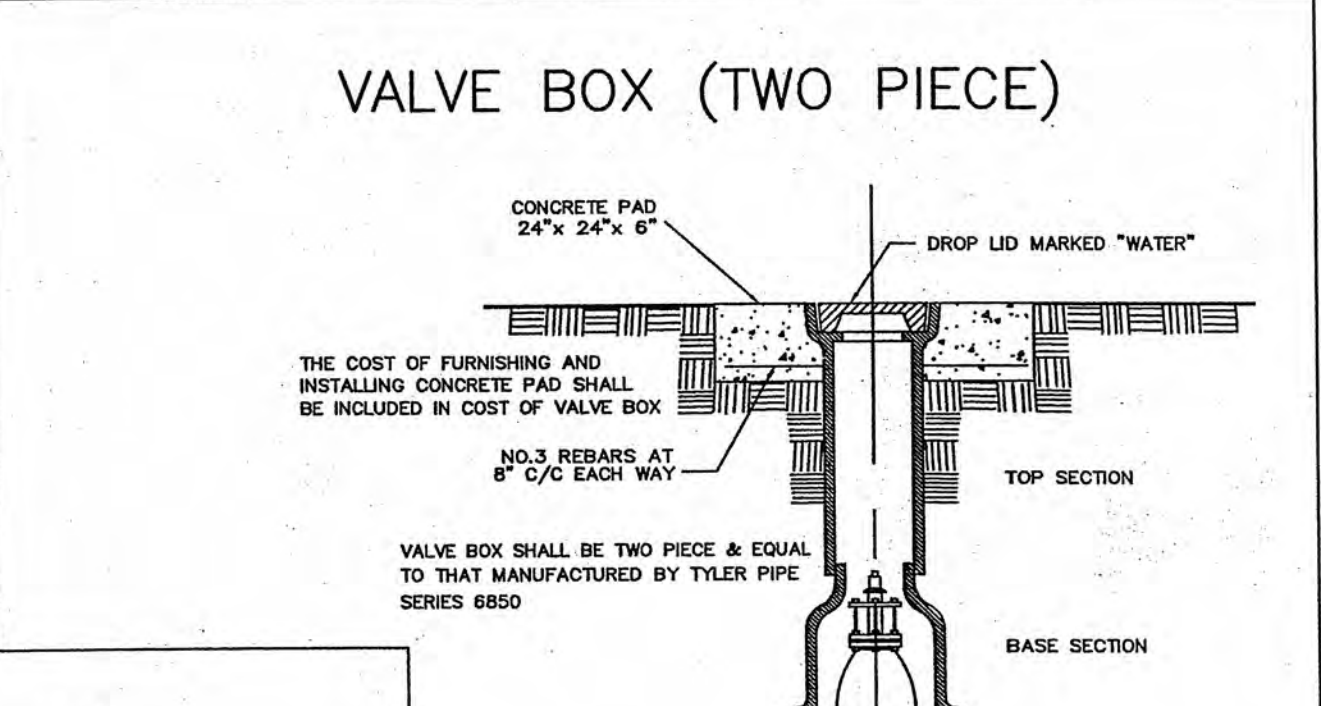
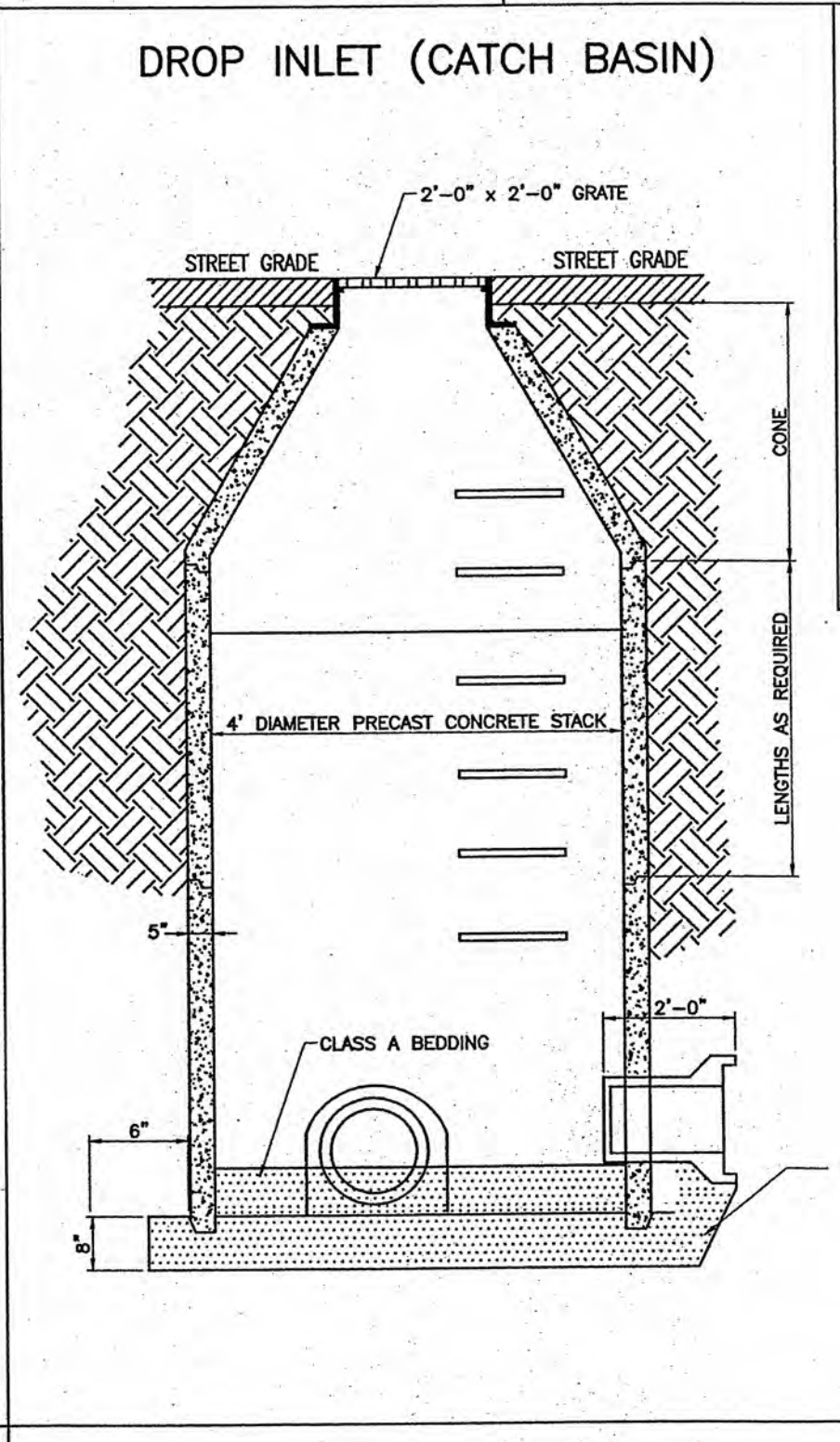
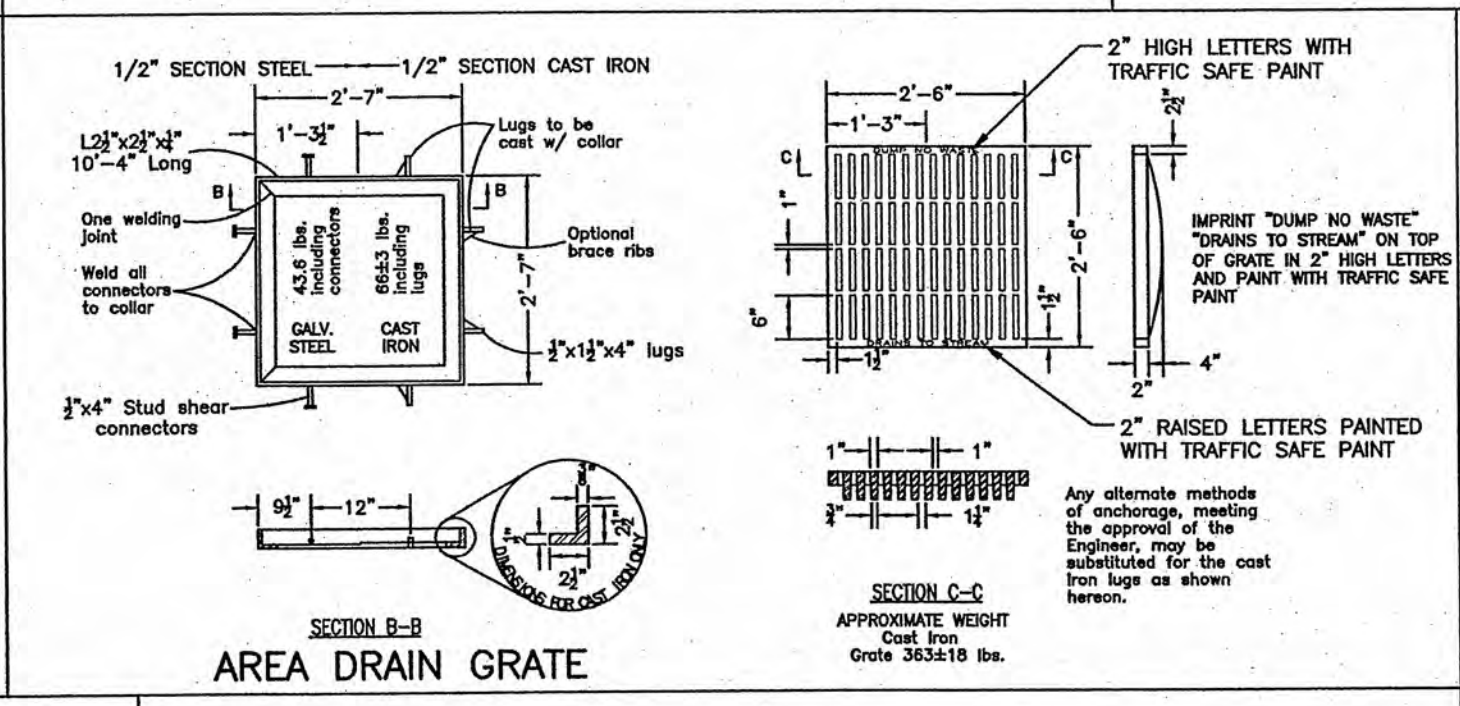
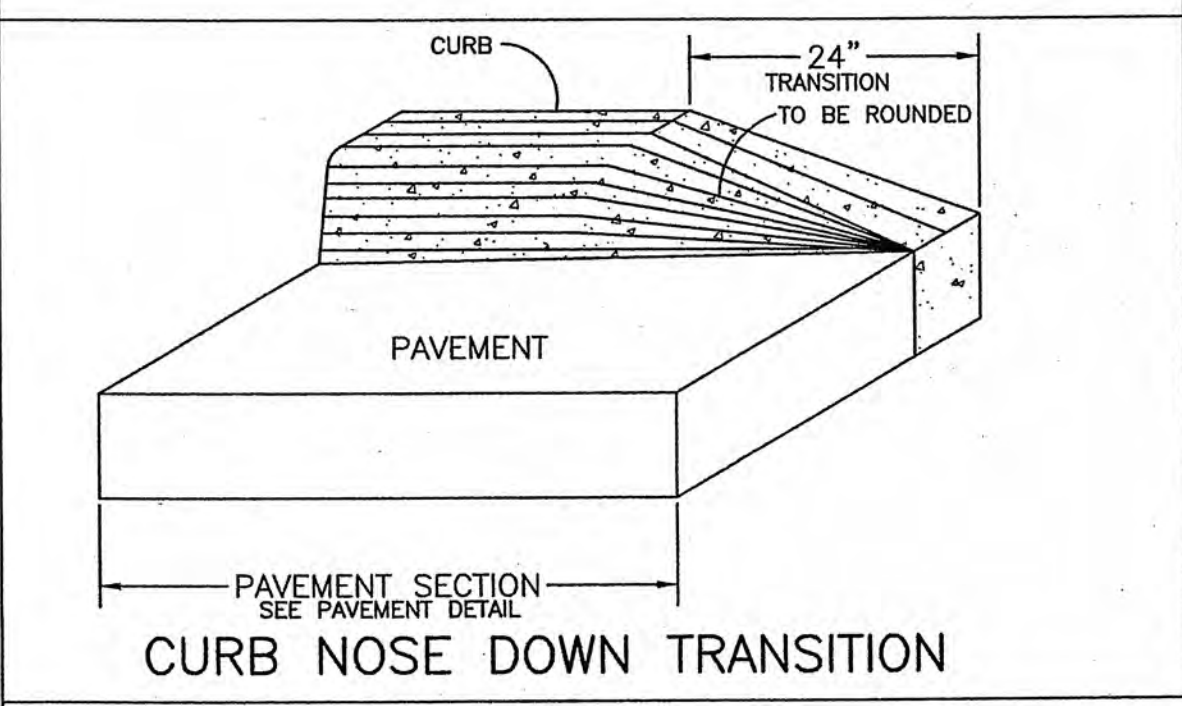
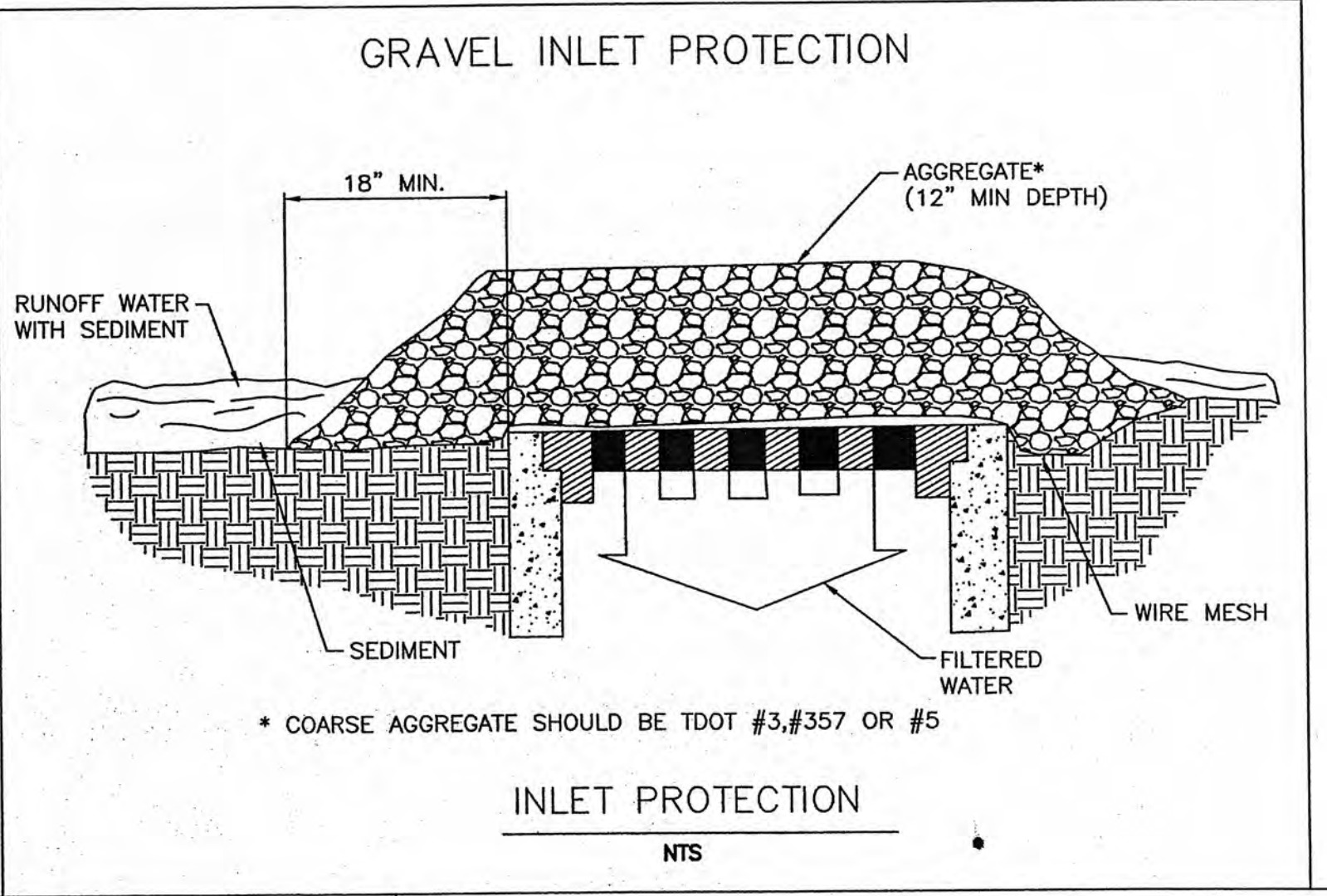
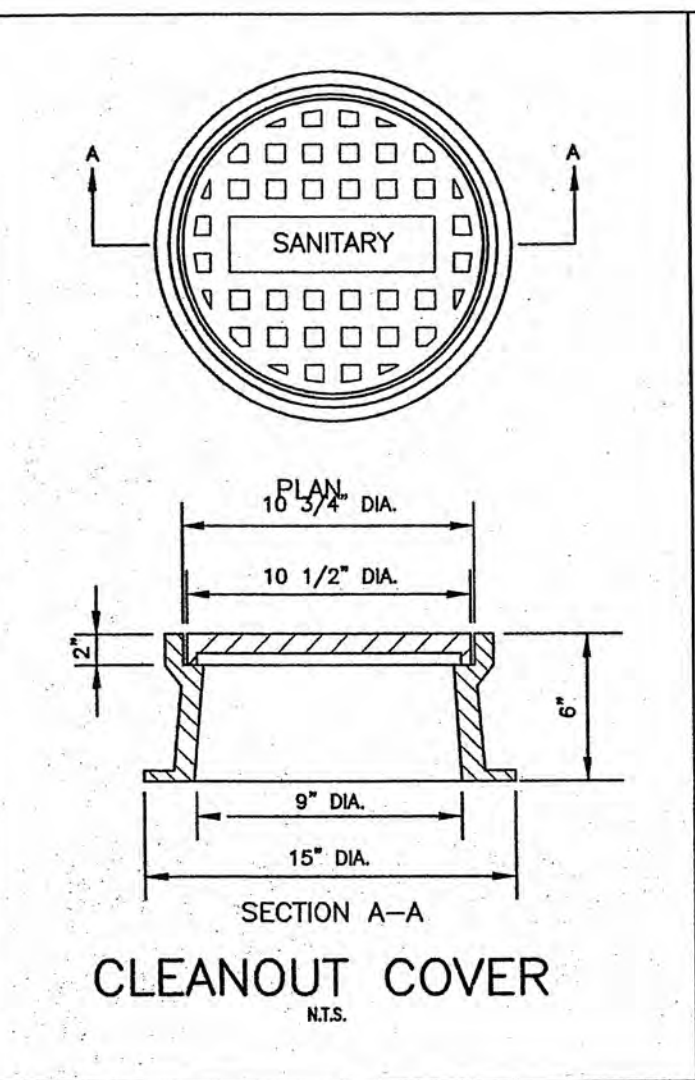
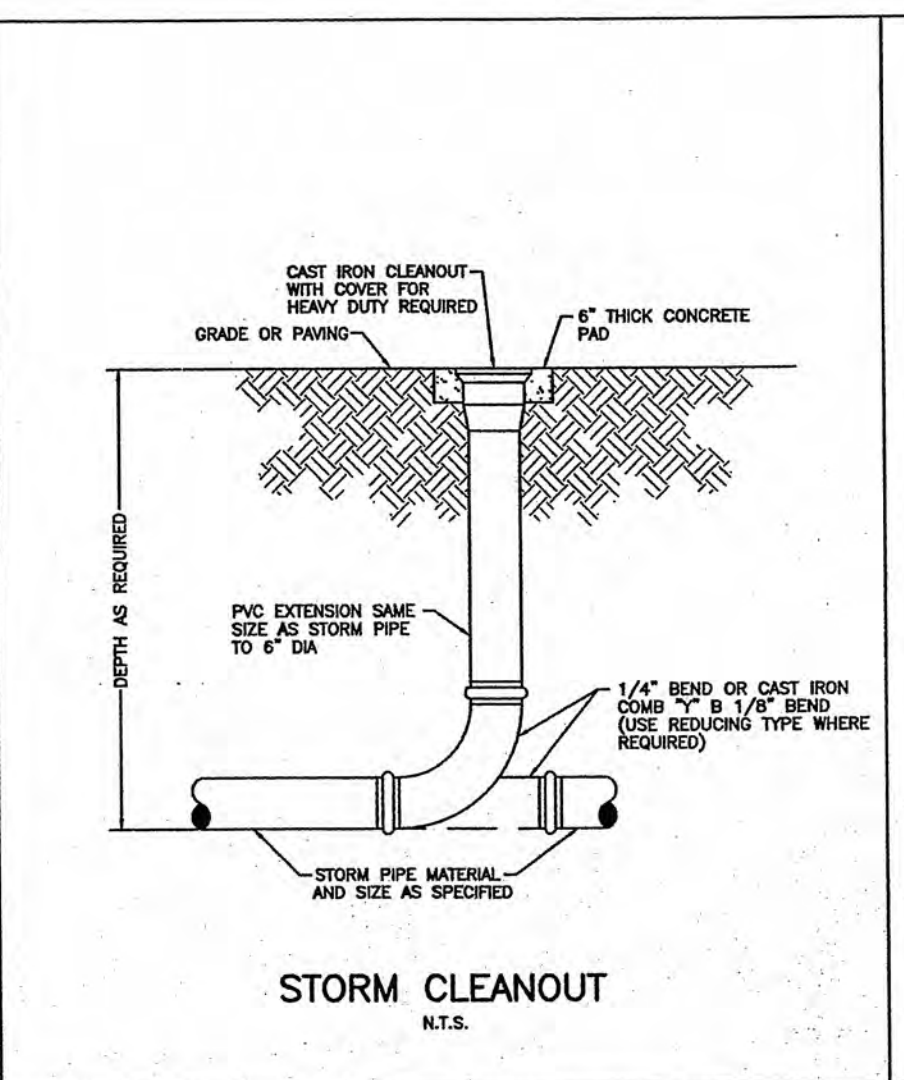
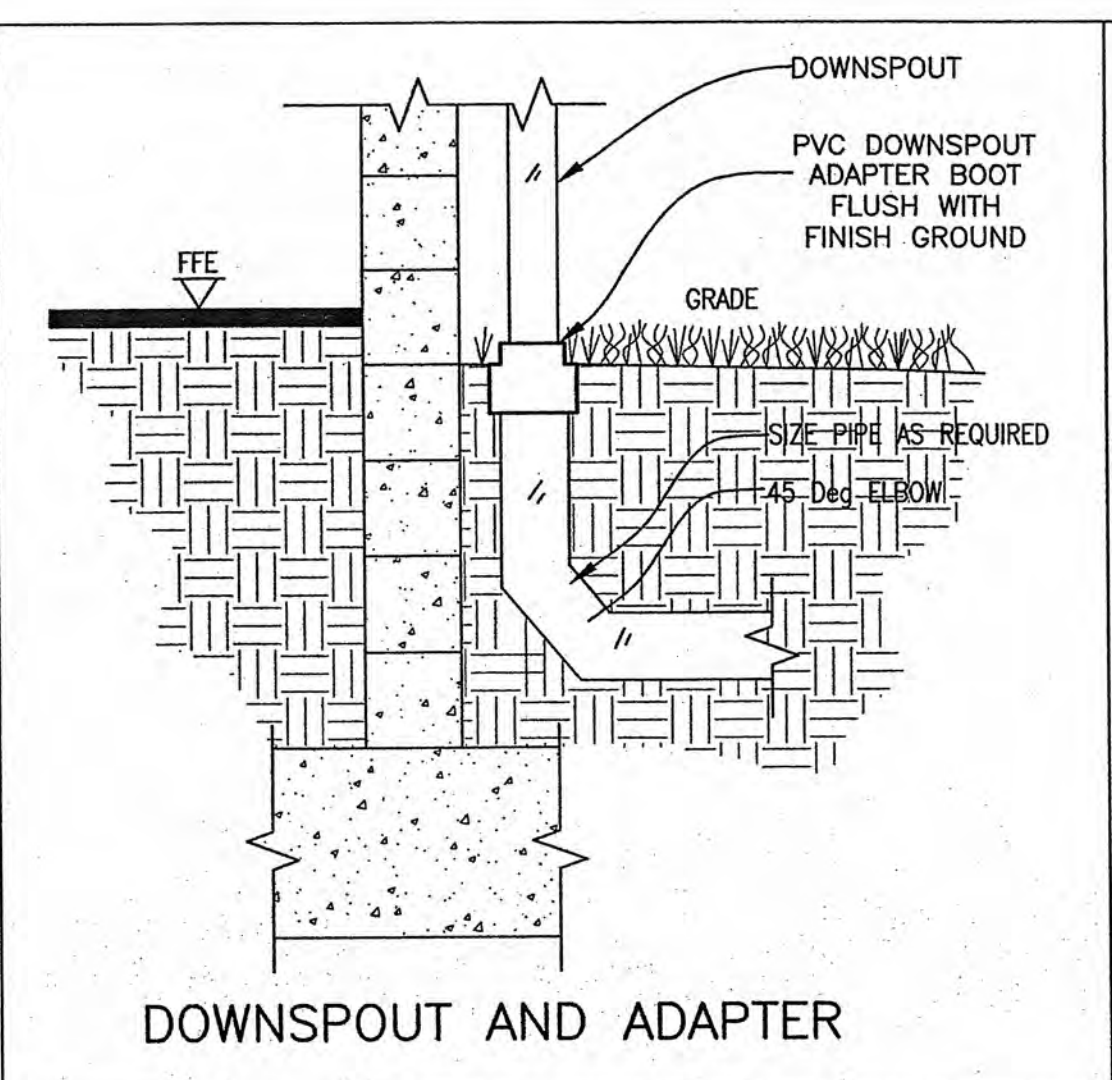
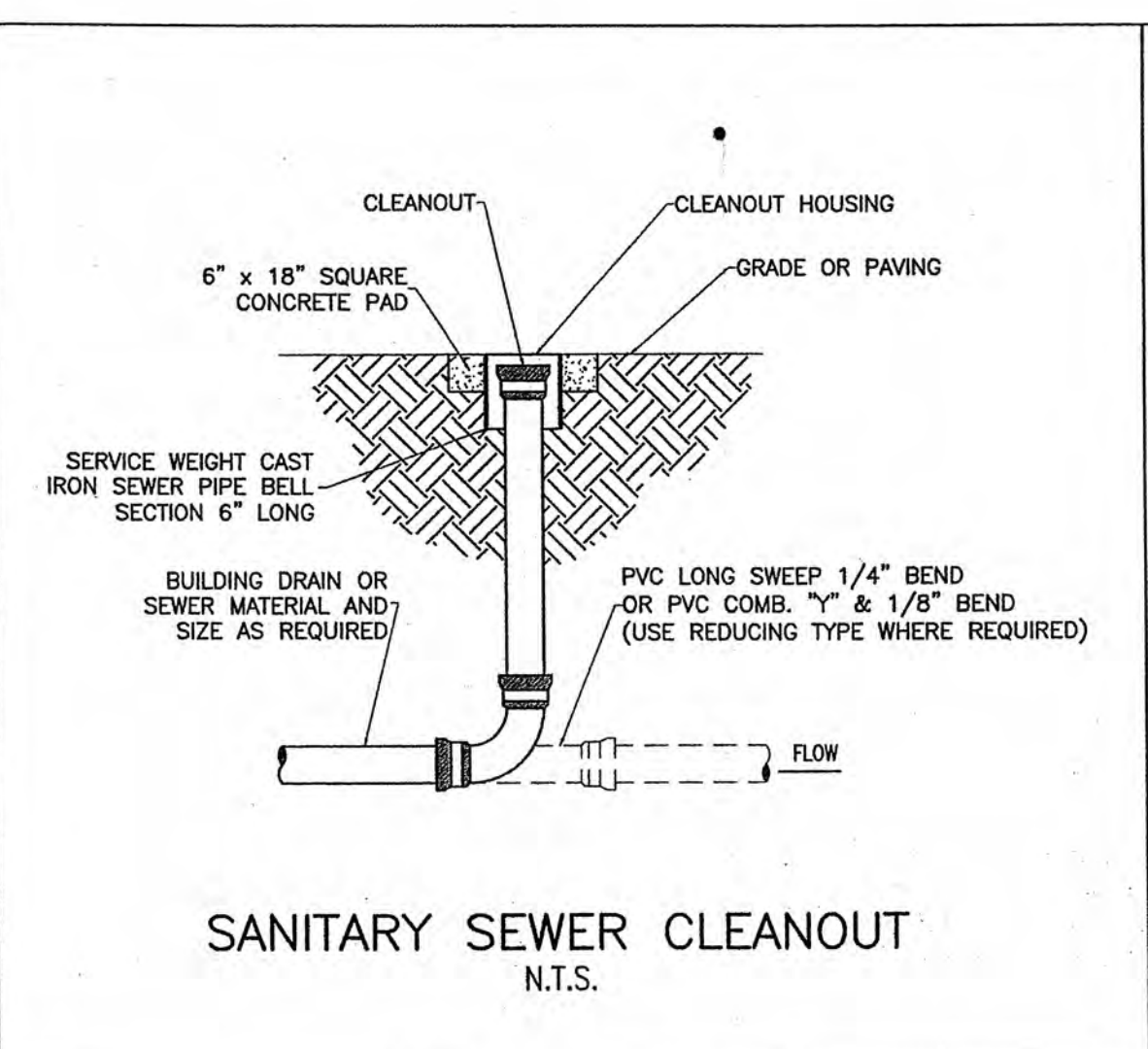
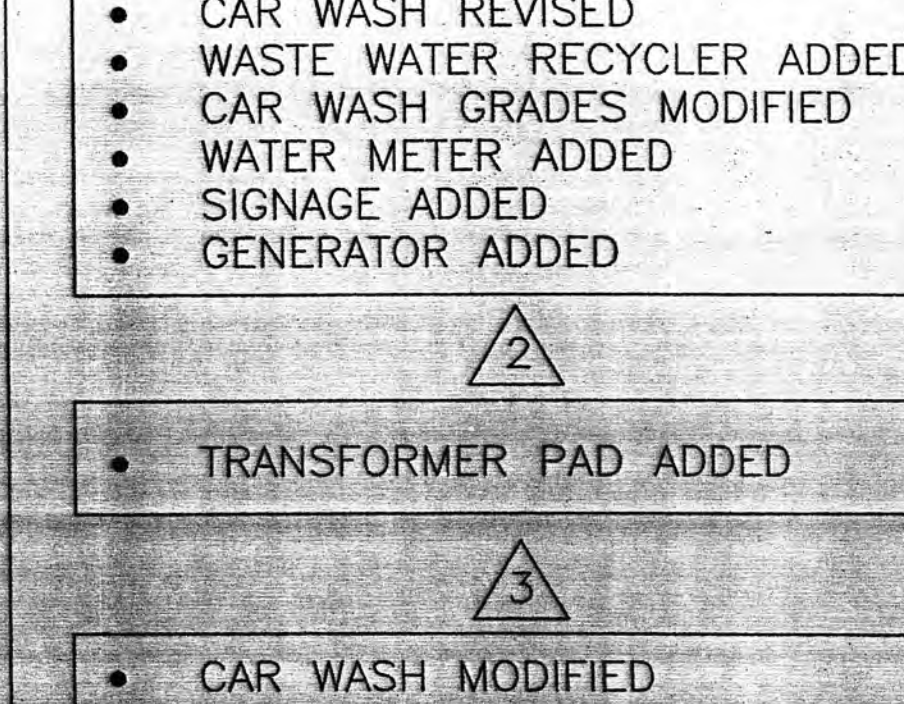
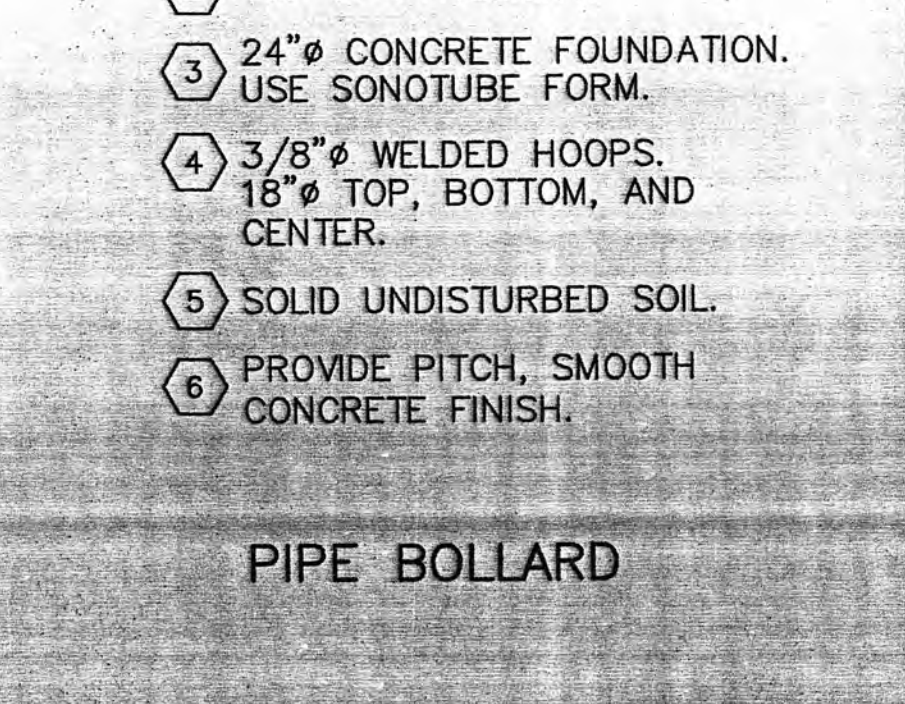
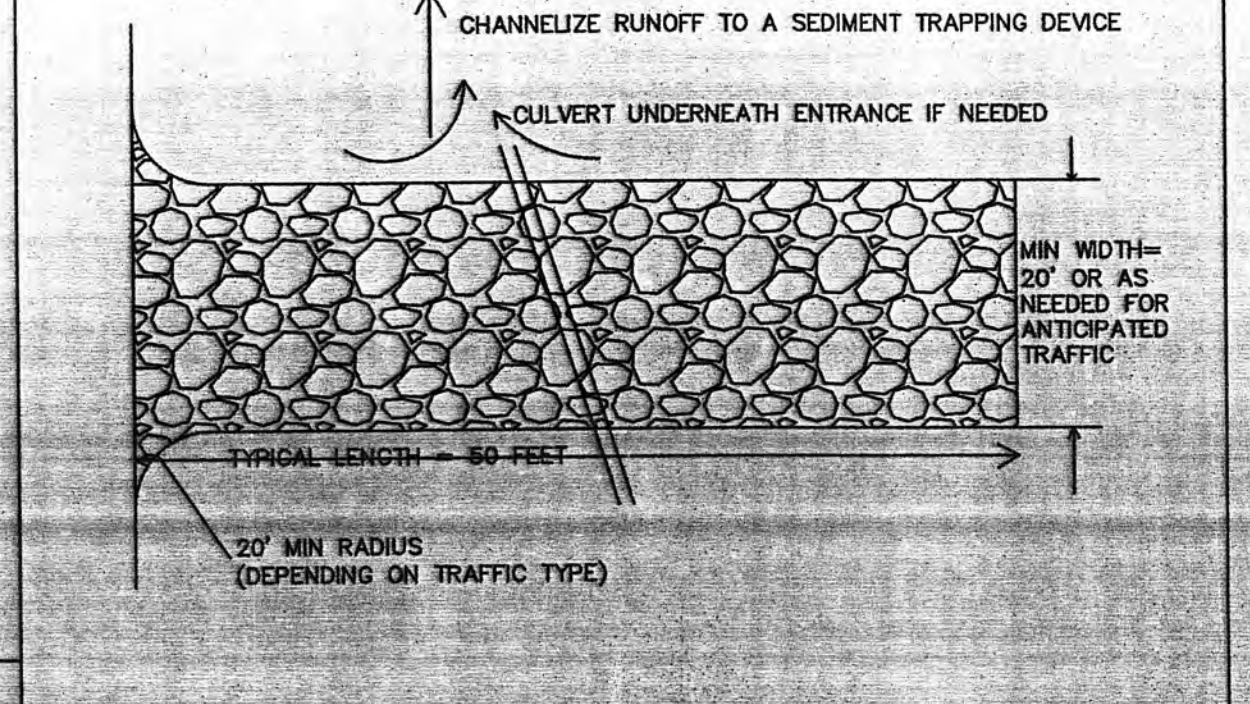
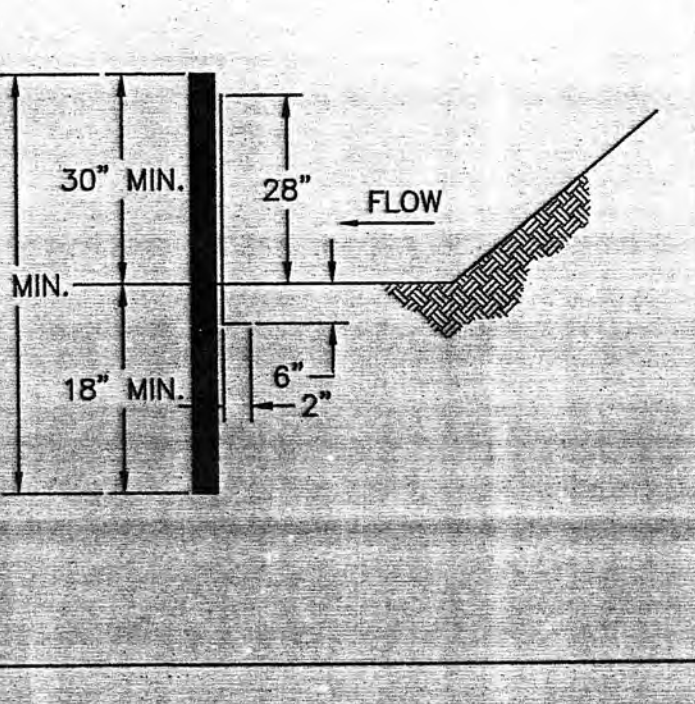
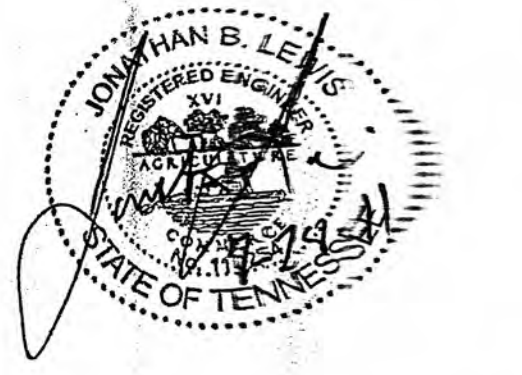




TYPE "A" SILT FENCE SPECIFICATIONS	
TENSILE STRENGTH (LBS. MIN.) (1)	WARP - 120
(ASTM D-4632)	FILL - 100
ELONGATION (% MAX.)	40
(ASTM D-4632)	
AOS (APPARENT OPENING SIZE)	#30
(MAX. SIEVE SIZE) (ASTM D-4751)	
FLOW RATE (GAL./MIN./SQ. FT.)	25
(DOT-37)	
ULTRAVIOLET STABILITY (2)	80
(ASTM D-4632 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4335)	
BURSTING STRENGTH (PSI MIN.)	175
(ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	
MIN. FABRIC WIDTH (INCHES)	36



MK	DATE	BY
1	7-08-11	JBL
2	7-19-11	JBL
3	7-28-11	JBL

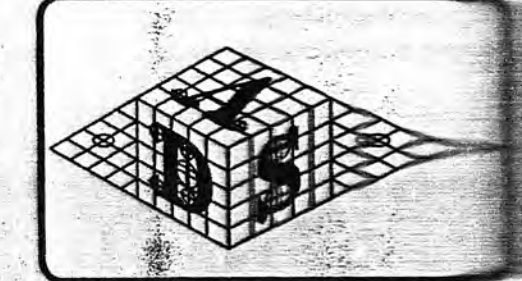


PROPOSED GAS-N-GO
FOR FOOD CITY
HARRIMAN, TENNESSEE

SITE CONSTRUCTION DETAILS

Appalachia Design Services Inc.
Blairsville, Tennessee 37617
Phone: (623) 323-1206 Fax: (623) 323-0655

Company Contacts:
jim@adsi.com
jim@adsi.com
jim@adsi.com
jim@adsi.com
jim@adsi.com



DRAWN
JBL
CHECKED
JSF
DATE
7-28-11
SCALE
AS NOTED
JOB NO.
G-N-G HARRIMAN PM

SHEET
D1
OF
5
SHEETS

CONTACTS

DEVELOPER:
K.V.A.T. FOODS INC.
201 TRIGG STREET
SUITE 306
ABINGDON, VA. 24211
P: (276) 628-5503
CONTACT: LOU SCUDERE

CITY BUILDING DEPARTMENT:
MUNICIPAL COMPLEX
609 N. ROANE ST.
HARRIMAN, TN. 37748
P: (865) 882-1951
CONTACT: MARIA NELSON

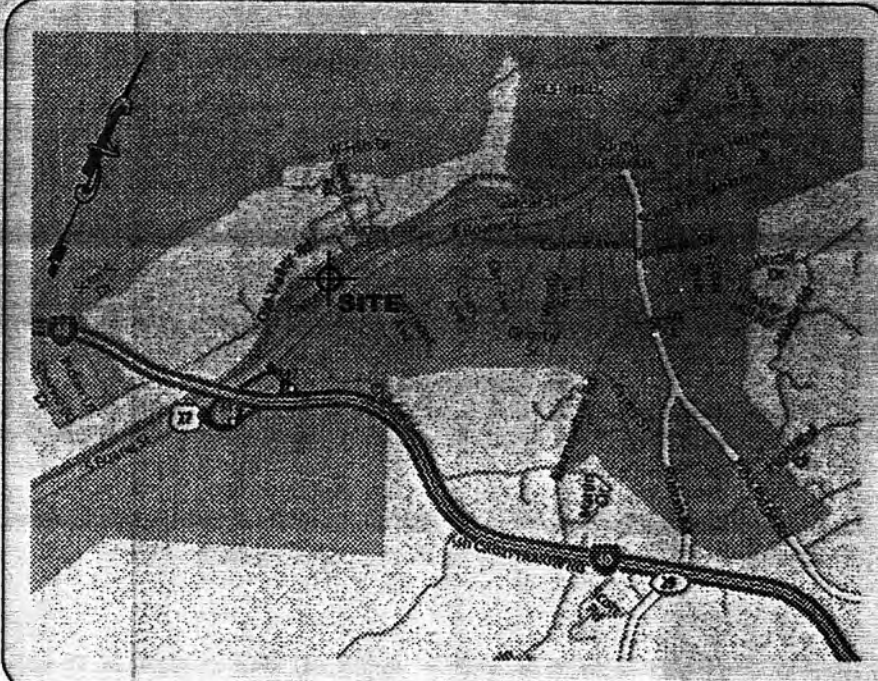
WATER/SEWER:
HARRIMAN UTILITY BOARD
300 N. ROANE ST.
KNOXVILLE, TN. 37748
P: (865) 882-3242 EXT. 227
CONTACT: FRANKIE DAVIS

ELECTRIC/GAS:
HARRIMAN UTILITY BOARD
300 N. ROANE ST.
KNOXVILLE, TN. 37748
P: (865) 882-3242 EXT. 235
CONTACT: STEVE LADD

STREETS:
T.D.O.T. REGION 1 TRAFFIC OFFICE
7345 REGION LANE
KNOXVILLE, TN. 37914
P: (865) 594-2456
CONTACT: KEVIN FURTEK

ENGINEERING/SURVEYING SERVICES:

APPALACHIA DESIGN SERVICES, INC.
245 BIRCH ST.
BLOUNTVILLE, TENNESSEE
P: (423) 323-1206
CONTACT: TIM KUYKENDALL



VICINITY MAP
NTS

SITE INFORMATION:

CURRENT OWNER:
TYLER & LAURA OVERSTREET
EXISTING SITE ACREAGE:
.64 AC.± TOTAL
CURRENT ZONING:
C2
BUILDING SETBACK LIMITS:
• FRONT = 30 FEET
REAR = 15 FEET
SIDE = 25 FEET
DEED REFERENCE DATA:
D.B. M22, PG. 542
NORTH ALIGNMENT:
NORTH RECONCILED TO
P.B. PCB PAGE 184

DRAWING INDEX

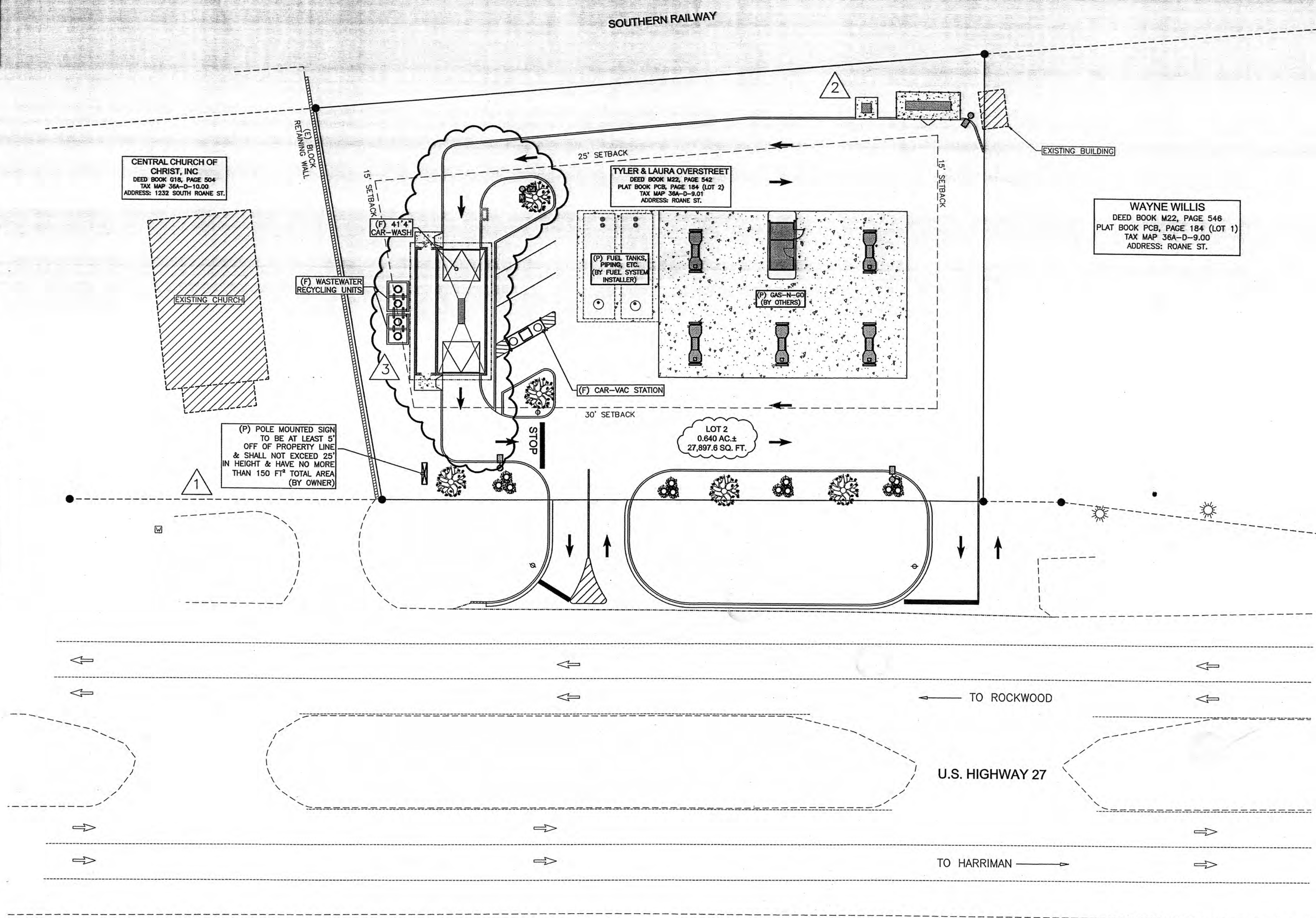
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- C1 EXISTING CONDITIONS
- C2 GRADING & E&S PLAN
- C3 UTILITY PLAN
- C4 SURFACING/ LANDSC. PLAN
- D1 DETAIL PAGE

- CAR WASH REVISED
- WASTE WATER RECYCLER ADDED
- CAR WASH GRADES MODIFIED
- WATER METER ADDED
- SIGNAGE ADDED
- GENERATOR ADDED

TRANSFORMER PAD ADDED

- CAR WASH MODIFIED
- GAS LINE ADDED
- CAR WASH UTILITIES MODIFIED



NORTH

LEGEND

- | | | | |
|---------------------------------|-------------------|---------------------------------|-----------------------------------|
| SAN MH - SANITARY SEWER MANHOLE | GA - GUY ANCHOR | TREE - TREE | OHU - OHU - OVERHEAD UTILITY LINE |
| STMH - STORM DRAIN MANHOLE | SG - SIGN | SHRUB - SHRUB | UGU - UGU - UNDER GROUND UTILITY |
| CB - CATCH BASIN | FH - FIRE HYDRANT | EB - ELECTRIC BOX | GL - GAS - GAS - GAS LINE |
| WV - WATER VALVE | AD - AREA DRAIN | AS - ASPHALT | WL - W - W - WATER LINE |
| UP - UTILITY POLE | CO - CLEAN OUT | CON - CONCRETE | FX - X - FENCE LINE |
| IRN - IRON ROD NEW | LP - LIGHT POLE | SAN - SAN - SANITARY SEWER LINE | ST - ST - STORM SEWER LINE |
| IRO - IRON ROD OLD | GV - GAS VALVE | | |
| MON - CONCRETE MONUMENT | WM - WATER METER | | |
| BM - BENCHMARK | PP - PROPOSED | | |
| EX - EXISTING | | | |



CALL THREE WORKING DAYS
BEFORE YOU DIG
DIAL 8-1-1
TENNESSEE ONE CALL SYSTEMS INC.

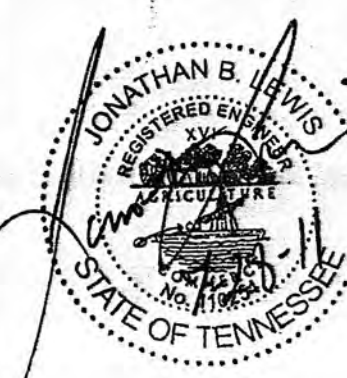
NOTE:
CONTRACTOR SHALL VERIFY THE LOCATION OF
ALL EXISTING UTILITIES PRIOR TO BEGINNING
CONSTRUCTION

SITE/CIVIL CAUTION - NOTICE TO CONTRACTOR

The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.

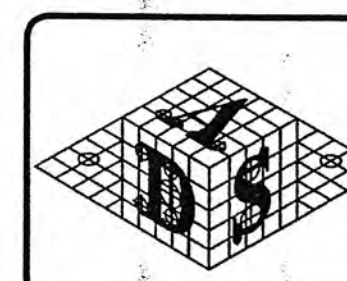
SCALE: 1" = 20'
0' 20' 40' 60'

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△	7-19-11	JBL
△	7-28-11	JBL



PROPOSED GAS-N-GO
FOR FOOD CITY
HARRIMAN, TENNESSEE
TITLE PAGE

Appalachia Design Services Inc.
Blountville, Tennessee 37617
Phone: (423) 323-1206 Fax: (423) 323-1065
Company Contacts:
timkuykendall@adscad.com
jwillis@adscad.com
stevehamby@adscad.com
jeffcasey@adscad.com
jimstreet@adscad.com
steveminton@adscad.com
heatherhughes@adscad.com
bradvanhus@adscad.com



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CHECKED JSF
DATE 7-28-11
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JOB NO. G-N-G HARRIMAN R4
SHEET TITLE OF 5 SHEETS

These documents prepared by an Engineer are instruments of the Engineer's service. Unless otherwise indicated, the Engineer shall be deemed the author of drawings, specifications and other documents and will retain all common law, statutory and other reserved rights, in addition to the copyright. Documents prepared by the Engineer are for use solely with respect to this project. These documents shall not be used, copied or retained without the specific written consent of the Engineer. Any violations of the above rights of the Engineer shall be prosecuted to the maximum possible extent within the law.

SITE NOTE:
THE OWNER/DEVELOPER SHALL BE REQUIRED TO OBTAIN ALL ADDITIONAL PROPERTIES AND REQUIRED EASEMENTS TO COMPLETE THE SITE AS SHOWN ON THESE PLANS. THE PROPOSED SITE IMPROVEMENTS AS SHOWN IN THESE PLANS SHALL NOT BE PERFORMED UNTIL THE REQUIRED EASEMENTS AND PROPERTIES ARE ACQUIRED AND APPROVED.

EXCAVATION AND GRADING NOTES

GENERAL
The requirements listed below are intended to serve as an outline of general requirements. Additional requirements may be set forth in the project manual. Contractor is cautioned to consider all requirements of the project during the bidding process.

CLEARING
Comply with local and state ordinances regarding disposal of debris. Do not burn debris on site without specific written approval of the local authority. Clear and grub for new construction as required.

EXCAVATION PREPARATION
Verify location of existing on-site utilities. Protect and maintain existing utilities as required. Establish and verify existing and proposed dimensions shown on the drawing. Report any errors or inconsistencies to the General Contractor before commencement of work. Commencement of work with out notification will constitute acceptance of the site as is.

EXISTING TOPO ACCURACY
Exist contours shown are intended to form a general description of surface ground elevations. Topographic information shown herein shall be considered to have not more than the following plus or minus limits of accuracy: 0.10 Feet at benchmarks, 0.25 Feet at spot grades, 1.0 Feet at contour lines. Contractor is cautioned that straight line interpolation between contours may not exactly reflect existing conditions. Areas of relatively quick changes in contours should not be allowed to unduly influence interpretation of contours. Report any errors or inconsistencies to the General Contractor, before commencement of work. Any error not so reported cannot be considered for adjustment in contract price.

STRIPPING AND SPREADING TOPSOIL
Topsoil shall be stripped and temporarily stored for later reuse. If no stock pile area is noted on grading plan, stock pile shall be in such a place to avoid conflict with existing and proposed features and other trades. All conflict with proposed site features and other trades, the grading contractor shall relocate the stock pile at no additional fee to the owner. Particular attention shall be paid to final features noted that will be required for landscape purposes. General topsoil spreading will be by grading contractor to a minimum depth of 6" at any point except on slope of 2-1/2 to 1 or steeper where topsoil depth shall be 2" min. At any point not receiving sod.

PROOF-ROLLING
All areas to receive new structural fill or other new construction shall be proof rolled with a 20 ton tandem dump truck in presence of soils testing agent before commencement of any construction activity. All areas to be proof rolled shall receive 8 passes with compaction roller. Soil engineer shall not approve until all grading. Do not commence grading prior to such notification.

UNDERCUT-BACKFILL
Undercut shall mean excavation or other removal of unsuitable material below elevation of proposed final subgrade. No case shall the term undercut be used to describe material occurring above final subgrade elevation. Extent of undercut of unsuitable materials, any must be recommended by the soil engineer for the owner's approval. Soil engineer shall not have unilateral authority to direct undercut activities without approval of the owner's representative. Soil engineer's written field notes will be required to substantiate amounts of undercut. Backfill shall be of approved material only. Money for required testing shall be included in quoted price concerning undercut and backfill.

STRUCTURAL FILL
Structural fill shall be compacted as specified in excavation and grading schedule within 1" to 3" of optimum moisture. No case shall the term structural fill be used to describe material occurring above final subgrade elevation. Final subgrade shall be approved by Soils Eng. Place fill and backfill in layers as specified in excavation and grading notes. Use no deleterious material, gravel or less than 3" in size. In-situ soils may require additional water or may require additional drying to reach optimum moisture content for compaction.

GRADING TOLERANCE
Grading contractor shall bring subgrade to within an average of 1/10 of one foot of required elevation to obtain finished grade indicated on drawings except at locations where spot elevations are shown and where floor elevations are shown which shall be within 1/100 of 1 foot of required elevations. Final subgrade shall be spot checked by a licensed surveyor with not less than 1 shot per 50' and at each finished floor elevation and a drawing prepared and forwarded to ADS for approval prior to commencing fine grade paving or building construction. Grading Contractor shall be responsible for minor adjustments in grades as directed by the GC. Such changes shall be limited to 1500 cubic yards total. No additional cost will be allowed for this work.

IMPORT/EXPORT OF SITE MATERIALS
All import and export materials needed to complete plan per specifications shall be the sole responsibility of site grading contractor. Allowances will not be given for the removal of cut or fill material nor will allowances be given for the exporting or importing of cut or fill material. Any off site borrow or waste areas to be permitted by the site grading contractor prior to construction. All site testing of materials will be the sole responsibility of the site grading contractor.

TESTING
The Grading Contractor shall include price of all required testing as set forth herein to be performed by an independent qualified geotechnical testing agent suitable to the Developer. Test reports must use graphic location map at 1" = 100' scale for location of density tests. Original copies of all tests shall be forwarded directly to the General Contractor from the testing agent. All tests shall specifically state that the test either passes or fails to meet the geotechnical specifications. Grading Contractor shall include in his base bid 10 (ten) soil compaction tests after completion of the work, located per General Contractor.

WATER CONTROL
The Grading Contractor shall furnish all labor, materials and equipment necessary to keep this work free of water either from surface sources or from underground sources. Best selection of equipment and methods shall be the sole responsibility of the Grading Contractor. The Grading Contractor shall be and is responsible for all damage incurred in handling water conditions. Additionally, the Grading Contractor shall provide means necessary to avoid direct run-off from the project onto adjacent property.

SEEDING
Seeding of all disturbed areas not paved or built upon shall be the responsibility of the grading contractor unless noted otherwise. Hardened soil shall be loosened to a depth of 6" and topsoil respread as noted before seeding. Respread topsoil shall be free of any debris and or gravel. Reseed per the listed seeding schedule. Seeding shall be as specified on the Landscape Plan.

EROSION CONTROL
Exposes minimum amount of subgrade possible at one time to allow for efficient processing of the work. Grading and other erosion control means shall be employed, maintained and reconstructed as required if destroyed by erosion. Sediment deposited on existing paving by construction activities shall be cleared-up immediately. Temporary sediment fences shall be constructed and/or installed prior to stripping of topsoil. Provide and maintain inlet protection ground drainage structures and to prevent siltation throughout construction. Re-topsoil or rework topsoil and reseed in areas that experience erosion during construction. Do not remove erosion control measures until entire site is stabilized.

PERMITS
Grading Contractor shall pay all grading permit fees. Grading Contractor to post grading bond, if required.

NOTE:
ALL ROOF DRAIN LATERALS TO BE 6" PVC FITTED WITH DOWN SPOUT ADAPTER BOOT FLUSH W/ FINISHED GROUND.

EROSION CONTROL SEQUENCE:

1. RESPONSIBLE PARTIES ARE TO: SUBMIT EROSION AND SEDIMENT CONTROL PLAN FOR APPROVAL PRIOR TO ANY GRADING ACTIVITY ON SITE.
2. INSTALL ALL TEMPORARY OR PERMANENT EROSION AND SEDIMENT CONTROL DEVICES AND MEASURES AS CALLED FOR ON THE CONSTRUCTION DRAWINGS.
3. INSPECT ALL EROSION AND SEDIMENT CONTROL DEVICES ON A REGULAR BASIS AND ALWAYS IMMEDIATELY FOLLOWING ANY RAINFALL.
4. MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES. REPAIR OR REPLACE DETERIORATED MATERIALS AS NEEDED.
5. INSTALL PERMANENT EROSION AND SEDIMENT CONTROL DEVICES.
6. STABILIZE ALL SLOPES OF 2:1 OR GREATER (AND ANY OTHER POTENTIALLY ERODIBLE AREAS) WITH "EXCELSIOR MAT" OR APPROVED EQUAL, INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
7. ALL PARKING & BUILDING AREAS SHOULD BE STABILIZED WITH STONE IMMEDIATELY AFTER GRADING.
8. PROVIDE GRASSING COVER AS REQUIRED.
9. REMOVE ANY TEMPORARY EROSION CONTROL GROUND COVERS PRIOR TO PERMANENT SEEDING.
10. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AND MEASURES UPON COMPLETION OF THE PROJECT.

EROSION CONTROL NOTES:

1. INSTALL ALL EROSION CONTROL DEVICES PRIOR OBTAINING A BUILDING PERMIT.
2. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL REQUIREMENTS AND SHALL COMPLY WITH CITY/COUNTY AND STATE EROSION & SEDIMENT CONTROL CHANGES OR REQUIREMENTS FOR BOTH OFF-SITE (IF USED) AND ON-SITE EROSION CONTROL MEASURES DURING CONSTRUCTION.
3. PRIOR TO ANY DEMOLITION AND GRADING, FENCE IS TO BE INSTALLED AS INDICATED ON EROSION CONTROL PLAN. "SYNTHETIC FENCING SHALL BE "MIRAF 100X" ENVIRONMENT BY "CELANESE CORP" (OR APPROVED EQUAL) FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
4. ALL AREAS TO RECEIVE IMPERVIOUS SURFACES SHALL BE GRAVELED IMMEDIATELY UPON COMPLETION OF GRADING. AREAS TO BE GRASS OR PLANT BEDS ARE TO BE STABILIZED WITH STRAW AND MULCH. EROSION CONTROLS ARE SUBJECT TO CHANGES BY CITY/COUNTY & STATE EROSION & SEDIMENT CONTROL OFFICER'S FIELD CHANGES.
5. GRADING CONTRACTOR TO USE SOD IN LIEU OF SEEDING IN ANY AREAS THAT CONTINUALLY ERODE.
6. STABILIZE ALL SLOPES OF 2:1 OR GREATER (AND ANY OTHER POTENTIALLY ERODIBLE AREAS) WITH "EXCELSIOR MAT" OR APPROVED EQUAL, INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
7. PRE-CONSTRUCTION GROUND COVER SHALL NOT BE DISTURBED MORE THAN 14 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
8. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER CESSATION OF CONSTRUCTION IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. EXCEPT IN THE FOLLOWING SITUATION WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN FOURTEEN DAYS, TEMPORARY SOIL STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

SCHEDULE OF EROSION AND SEDIMENT CONTROL INSPECTIONS:

- SITE GRADING CONTRACTOR is designated to be responsible for erosion and sediment controls.
- Inspections shall be made twice every 7 days regardless of rainfall.
- All control measures shall be inspected and repaired as necessary; prior to any anticipated rainfall and immediately after any rainfall that generates runoff.
- During prolonged rainfall events, daily inspection and repair are required.
- Inspections and associated necessary repairs performed 60 hours prior to a rain event shall constitute compliance with "before anticipated storm events".
- Inspections and repairs performed on Friday shall meet the requirement for anticipated rain events over the weekend.
- The following records shall be maintained on site: Dates when major grading activities occur. Dates when construction activities temporarily or permanently cease on a portion of the site. Dates when stabilization measures are initiated.
- A record of inspections and all associated repairs shall be maintained on site at all times.
- Quarterly reports of all checks and repairs shall be compiled and kept on-site.
- Inspections shall be documented and shall include the following: Scope of the inspection. Date and time. Name and title or qualification of personnel making the inspection. Major observations relating to the implementation of the erosion and sediment control plan for this site. Date and time of any actions/corrective measures taken.

EROSION & SEDIMENT CONTROL LEGEND

- IP INLET PROTECTION
- OP OUTLET PROTECTION
- SF SILT FENCE
- MU MULCH
- B/M BLANKET/MATTING
- PS PERMANENT SEEDING
- CE CONSTRUCTION ENTRANCE

SITE STORM SYSTEM NOTES

PIPE MATERIALS
All pipe is to be 6" HDPE or CMP, as specified on the plans or approved equal. All pipe is to be free from defect and is to be connected using approved connection systems.

Prior to pipe being ordered, a submittal is to be provided to ADS for approval.

MINIMUM COVER
Minimum cover from top of pipe to finish grade shall be 2'-0".

PIPE SYSTEM INSPECTION
Prior to acceptance of completed stormwater system, installer shall notify GC. Installer and General Contractor shall inspect system together to verify completion.

AREA DRAINS, MANHOLES, AND CURB INLETS
Proposed area drains, manholes, and curb inlets to be precast concrete and manufactured by a certified precast plant. Shop drawings of the proposed structures to be submitted to ADS for review and approval.

DRAINAGE GRATES
Proposed area drain grates to be a Mesh # 4-636 (2" rectangular grates) or approved equal. Proposed curb inlet grates to be a Mesh #4 and precast concrete. Shop drawings of the proposed grates to be provided to ADS for approval.

SITE/GRADING

STRIPPING AND SPREADING SCHEDULE

Required inspection percentages (X max dry density)

Standard - spread method - ASTM Test # 2008

Building Area - 30% Parking/road - 30% Utility Trench - 30%

Minimum cover from top of pipe to finish grade shall be 2'-0".

TESTING

Allow 1 compaction test per 2500 S.F. (Max 50' x 50' area) per lot at building area.

Allow 1 compaction test per 2500 S.F. of cut or natural grade at building area.

Allow 1 compaction test per 2500 S.F. of cut or natural grade at parking area.

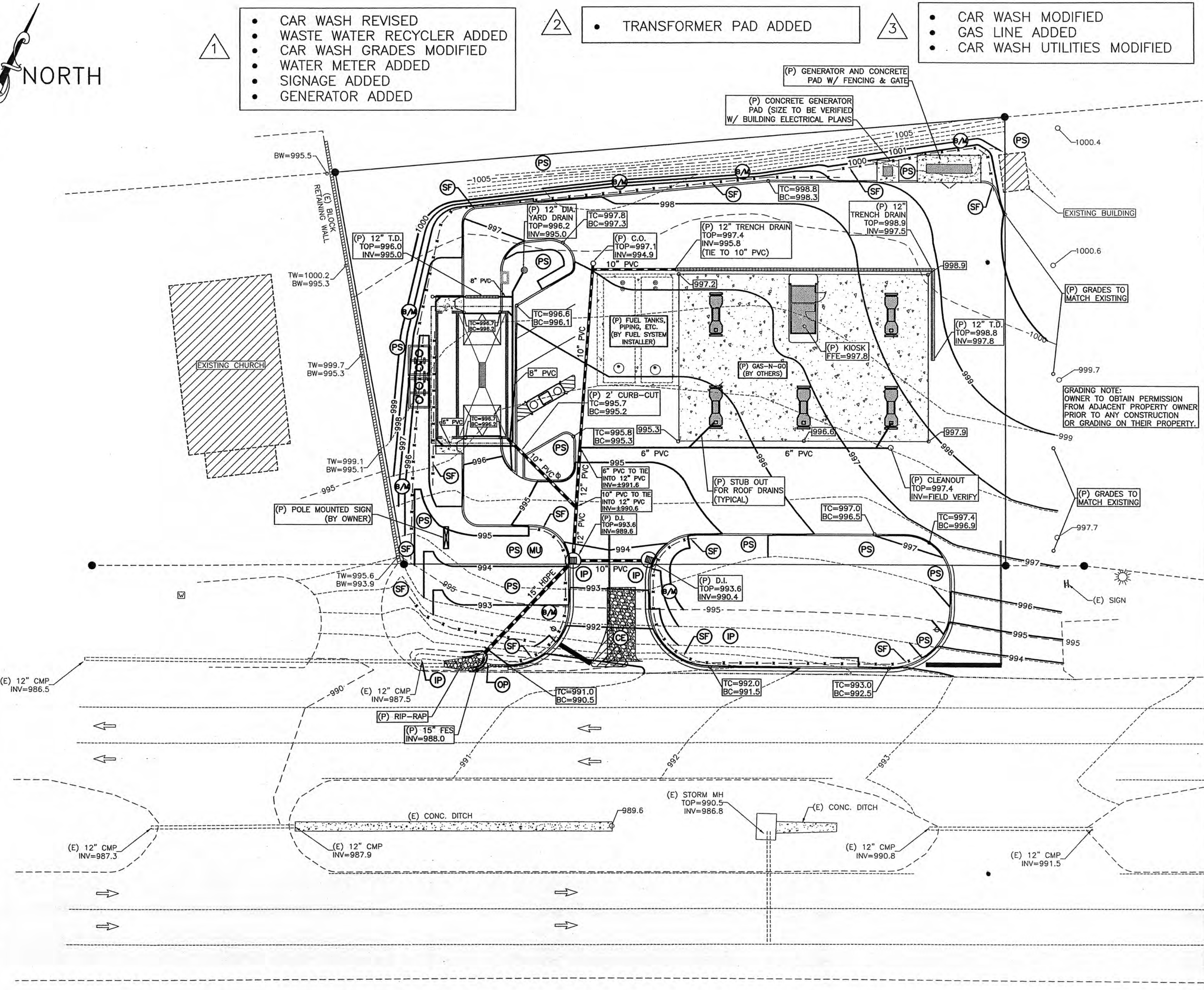
Allow 1 compaction test per 2500 S.F. of cut or natural grade at parking area.

Minimum RT thickness shall be 8", unless noted otherwise.

- CAR WASH REVISED
- WASTE WATER RECYCLER ADDED
- CAR WASH GRADES MODIFIED
- WATER METER ADDED
- SIGNAGE ADDED
- GENERATOR ADDED

- TRANSFORMER PAD ADDED

- CAR WASH MODIFIED
- GAS LINE ADDED
- CAR WASH UTILITIES MODIFIED



MK	DATE	BY
△	7-08-11	JBL
△	7-19-11	JBL
△	7-28-11	JBL



PROPOSED GAS-N-GO
FOR FOOD CITY
HARRIMAN, TENNESSEE
GRADING & DRAINAGE PLAN

Appalachia Design Services Inc.
245 Birch Street
Bloomington, Tennessee 37617
Phone: (423) 925-1205 Fax: (423) 925-1095

Company Contacts:
jim@adscad.com
jimtree@adscad.com
jimtree@adscad.com
jimtree@adscad.com
jimtree@adscad.com
jimtree@adscad.com
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IMPORTANT!
GEOTECHNICAL NOTE:
SEE SITE GEOTECHNICAL REPORT FOR ALL SUBGRADE INFORMATION. GEOTECHNICAL REPORT SHALL HAVE PRECEDENCE OVER INFORMATION BOTH GRAPHICAL AND WRITTEN INCLUDED WITHIN THESE SITE PLANS

CALL THREE WORKING DAYS BEFORE YOU DIG
DIAL 8-1-1
TENNESSEE ONE CALL SYSTEMS INC.

NOTE:
CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION

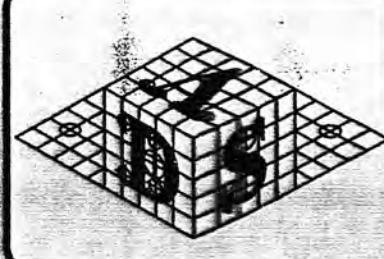
SCALE: 1" = 20'

0' 20' 40' 60'

SITE/CIVIL

CAUTION - NOTICE TO CONTRACTOR

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7-28-11
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0-N-0 HARRIMAN R4
SHEET
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OF
5
SHEETS

GENERAL The requirements listed below are intended to serve as an outline of general requirements. Additional requirements may set forth in the city regulations. Contractor is cautioned to consider all requirements of the project during the bidding process.

All water and sanitary sewer materials and construction must conform to Local and State specifications.

Utility Contractor shall obtain all necessary permits and pay all required installation and service tap fees, access fees, and impact fees. Before beginning installation, Utility Contractor shall verify with local utility providers that utility systems as indicated on the construction documents are approved by the utility.

Location dimensions shown are approximate only and must be field verified and coordinated with other trades. Extras will not be allowed due to lack of coordination.

As-built plans must be maintained throughout project and furnished to Owner's Representative after completion of work. The work will not be deemed complete until as-builts are provided to the Design Engineer. Consult project specifications manual for additional requirements.

Certain references may be made to "on-site" or "off-site" lines. An "off-site" line is a line in a right-of-way, utility easement, or other location under control of a governing authority. An "on-site" line is a line within the project boundary lines and not within a utility easement or right-of-way. For lines from 5' of proposed buildings and inside, refer to building plans and specs. Any line that is designated on the plan to be maintained by a utility authority shall be of materials and installation as directed by that authority even if such a line is "on-site".

Contact local utility company for on-site verification of location, size, depth, etc of all underground utilities prior to commencement of work. Tap into public utilities shall be performed in accordance with utility company requirements. Relocation of existing utilities (if any) shall be coordinated by the Utility Contractor with all governing authorities as to timing, repairs, charges, etc. Utility Contractor shall pay all fees.

Prior to ordering, submit manufacturer's literature on line, valve, and fittings for Plan Approving Authority's & Owner's Representative approval.

Provide top elevation of manholes & cleanouts as required to be flush with finish grade. See grading plan for finish elevation of grade. Top of structure elevations as indicated on utility site plan are approximate. Contractor shall coordinate to ensure flush top.

Domestic water line occurs from water meter to building. Domestic water lines shall use fittings of same material as line unless otherwise required by code authorities. Line material shall be as approved by utility provider.

Horizontal distance of 10 feet shall be maintained between water and sewer mains. A minimum separation of 18" vert and horiz shall be maintained between all pipes. If a vertical distance between water main and sewer is less than 18" when water main crosses over sewer or anytime a water main crosses under sewer, the sewer main must be ductile iron pipe for a distance of 20 feet centered on the crossing. No joint shall be within 9 feet of the crossing.

EXCAVATION AND BACKFILL
Earth backfill where specified shall be of same material and compaction as approved material generally used for structural fill elsewhere on this site. Pipe bedding shall be as scheduled. Stone bedding or backfill where required shall be 3/4" to 1-1/2" diameter compacted to 98% modified proctor. Sand shall be clean and without deleterious material. Refer to Local & State specifications for limits of bed and backfill. Testing of trench bedding compaction shall be as required by the owner and or state and local authority, unless noted otherwise. Testing of trench backfill compaction shall be 1 field density test per 500 CY or 100 LF of backfill.

All site mechanical lines must be tested and approved by local inspectors or utility authorities as applicable prior to covering of such lines. Copies of utility approval must be submitted to Owner's Representative before payment for work can be authorized. Any line that is to be maintained by the utility authority shall also be tested in accordance with the requirements and under the supervision of the utility authority. The following tests shall be performed on the site mechanical systems in the presence of the Owner's Representative and in accordance with the methods which are set forth in the project specifications manual:

- Water and fire piping -- hydrostatic (200 PSI) and sterilization
- Gravity sanitary sewer main --
 - a.) Mirror/lamp test & air pressure test, and
 - b.) Mandrel test 30 days after backfilling sanitize fire and water lines before placing any such line in service. Sanitize with a chlorine solution of at least 50 PPM in the water for a period of 24 hours or as directed to meet the requirements of local and state health departments. Duration of each waterline pressure test shall be not less than 2 hours.

- 1) ALL WATER AND SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE & LOCAL CONSTRUCTION STANDARDS AND SPECIFICATIONS OR THE DEVELOPER'S SITE SPECIFICATIONS WHICHEVER IS MORE STRINGENT.
- 2) THE UTILITY CONTRACTOR SHALL CONFIRM FIELD LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

- CONNECTION TO EXISTING PUBLIC FACILITIES SHALL BE MADE ONLY UNDER THE SUPERVISION OF A
SUPERVISOR.
- UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL
AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
- UTILITY CONTRACTOR SHALL BE RESPONSIBLE TO PAY MINIMUM 12" RIGID UNDERGROUND, FROM
SUPPLY SYSTEM TO TRANSFORMER LOCATION, AS INDICATED. ASSOCIATED COST BY UTILITY
CONTRACTOR.
- UTILITY CONTRACTOR SHALL FURNISH (2) - 4" TELEPHONE CONDUIT(S) TO THE BUILDING AT
THE LOCATION SHOWN ON THE UTILITY PLANS. PROVIDE NYLON PULL CORDS INSIDE CONDUIT.
- ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5" INSIDE THE BUILDING LIMITS AS
INDICATED ON THE UTILITY PLANS. PROVIDE NYLON PULL CORDS INSIDE CONDUIT.
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH STATE & LOCAL SPECIFICATIONS.
- FIRE LINE SHALL BE STUBBED UP 1' ABOVE FINISHED FLOOR ELEVATION IN SPRINKLER ROOM.
- REFER TO ARCHITECTURAL PLANS FOR LOCATION OF SEWER, DOMESTIC, AND IRRIGATION
CONNECTIONS.
- BEFORE EXCAVATION, ALL UNDERGROUND UTILITIES SHALL BE LOCATED IN THE FIELD BY THE
PROPER AUTHORITIES. THE UTILITY CONTRACTOR SHALL NOTIFY THE STATE ONE CALL SYSTEM AT
(800) 487-2862 FOR ALL CONDUITS/GRANDS.

1) ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 3'-6" ABOVE TOP OF PIPE, UNLESS OTHERWISE INDICATED.

- 4) CONCRETE SHALL BE PLACED IN 12" MAXIMUM LAYERS AND FIRE HYDRANTS SHALL BE PROTECTED BY 12" MINIMUM CONCRETE.
- 5) ALL WATER LINES SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED BEFORE ACCEPTANCE. SEE SITE WORK SPECIFICATIONS.
- 6) DIMENSION SHOWINGS ARE TO CENTERLINE OF PIPE OR FITTING.
- 7) ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
- 8) THE CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THE PROJECT.
- 9) ALL TRENCH PRIOR TO BACKFILLATION.
- 7) BACKFILL PREVENTERS SHALL BE PROVIDED BY THE UTILITY CONTRACTOR. 2"-1/2" DOMESTIC SERVICE LINE WITH R.P.D.A. BACKFILL PREVENTION AND 6" FIRE PROTECTION SERVICE LINES WITH R.P.D.A. BACKFILL PREVENTION SHALL BE PROVIDED.
- 8) ALL SPRINKLER, DOMESTIC AND SANITARY LADS TO BUILDING SHALL END AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END (FOR OTHERS TO REMOVE AND EXTEND AS NECESSARY).
- 9) ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 5'-0" FROM HYDRANT AND LOCATED BEHIND CURB, WHERE APPLICABLE.
- 10) SEE STATE AND LOCAL BUREAU OF FIRE DEPARTMENT FOR ALL COMPACTOR REQUIREMENTS.
- 11) CONTRACTOR SHALL INVESTIGATE ALL UTILITY CROSSINGS AND ADJUST ACCORDINGLY.

CONSTRUCTION NOTES:

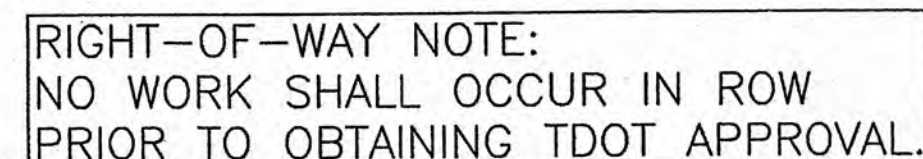
1. ELECTRIC SERVICE CONNECTION AND TRANSFORMER INSTALLATION SHALL BE COORDINATED WITH LOCAL UTILITY PROVIDER AND THE STATE DEPARTMENT OF TRANSPORTATION, AS APPLICABLE.
2. THE UTILITY CONTRACTOR SHALL COORDINATE THE RELOCATION AND ADJUSTMENT OF POWER POLE WITH LOCAL UTILITY PROVIDER.

3. THE UTILITY CONTRACTOR SHALL COORDINATE THE RELOCATION AND ADJUSTMENT OF TELEPHONE POLES WITH LOCAL UTILITY PROVIDER.
4. NATURAL GAS DESIGN AND INSTALLATION/RELOCATION TO BE PROVIDED BY GAS PROVIDER. THE CONTRACTOR SHALL COORDINATE LOCATION WITH UTILITY PROVIDER.

ELECTRICAL NOTE:
SEE BUILDING PLAN SHEET SE-1
FOR ALL ELECTRICAL ROUTING,
LAYOUT, MATERIAL, ETC. THIS SHEET,
C3, IS FOR REFERENCE ONLY.

UTILITY NOTE:
(P) UTILITIES FOR FUTURE CAR WASH
TO BE STUBBED-UP, CAPPED &
MARKED FOR FUTURE CONNECTION

UTILITY NOTE:
LOCATION OF (P) UTILITY CONNECTIONS TO
GAS-N-GO KIOSK & FUTURE CAR-WASH
TO BE VERIFIED WITH BUILDING PLANS
PRIOR TO CONSTRUCTION



— GAS —	— GAS —	— GAS —	PROPOSED GAS LINE
— UGU —	— UGU —	— UGU —	PROPOSED UNDERGROUND UTILITY
— TEL-FO —	— TEL-FO —	— TEL-FO —	PROPOSED TELEPHONE / FIBER OPTIC
— OHU —	— OHU —	— OHU —	PROPOSED OVERHEAD UTILITY
— SAN —	— SAN —	— SAN —	PROPOSED SANITARY SEWER LINE
— WL —	— WL —	— WL —	PROPOSED WATER LINE

-  SANITARY SEWER MANHOLE
 C.O. ● CLEANOUT
 G.V. GATE VALVE

- (E) EXISTING
(P) PROPOSED

LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHOWN ARE APPROXIMATE AND THOSE SHOWN ARE NOT NECESSARILY ALL OF THE EXISTING UTILITIES AND STRUCTURES. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION AND THE EXISTENCE OF ALL UTILITIES AND UNDERGROUND STRUCTURES.



CALL THREE WORKING DAYS
BEFORE YOU DIG
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TENNESSEE ONE CALL SYSTEMS INC.

NOTE:
CONTRACTOR SHALL VERIFY THE LOCATION OF
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CONSTRUCTION

SCALE: 1" = 20'

0' 20' 40' 60'

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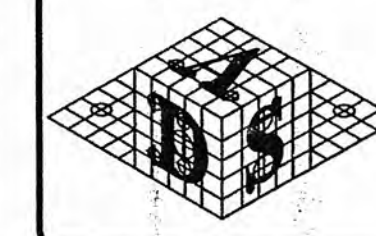


PROPOSED GAS-N-GO FOR FOOD CITY HARRIMAN, TENNESSEE UTILITY PLAN

Appalachia Design Services Inc.
245 Birch Street
Blountville, Tennessee 37617
Phone: (423) 323-1206
Fax: (423) 323-1065

Company Contacts:
jimstreet@atscad.com
sevenintone@atscad.com
heatherpugh@atscad.com
bradkushniw@atscad.com

timmyk@kendall@atscad.com
jlewis@atscad.com
steve@hamb@atscad.com
jess@atscad.com



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SITE PAVING NOTES

PAVING ELEVATION TOLERANCE

Final subgrade shall be inspected by paving contractor for required elevation and adequate compaction before commencing any paving activity. The commencement of work will be deemed as acceptance of subgrade. No allowance for additional fees will be accepted, once paving operations have commenced. Paving elevation shall not have more than 1/4" deviation in any 10' increment.

PAVING THICKNESS TOLERANCE

Paving thickness at any one core shall not be less than 95% of specified thickness. The average of all approved tests must be at least equal to the specified thickness for each material. Not more than 10% of all approved test may fall below specified minimums. Any area found to be less than 90% specified thickness shall be overlain with asphalt as directed by APPALACHIA DESIGN SERVICES.

TESTING DURING PLACEMENT

Paving Contractor shall perform several spot checks of paving base thickness prior to installation of any asphalt or concrete paving. Density tests shall be performed on each lift of the material. Testing shall be performed only by an independent testing agent approved by ADS. Test holes not spotted by ADS may not be considered acceptable. Allow a minimum of sixteen core tests to be located only by written instruction by ADS. The paving contractor shall repair all coring holes by filling holes with concrete flush to top of pavement.

ASPHALTIC PAVING MATERIALS

Material and installation shall be in accordance with the latest edition of the specification of the DOT of the state in which the project is located. Refer to paving materials legend.

CONCRETE

Provide tested expansion joints @ 20' O.C. (Max) and expansion joints @ 50' O.C. Concrete curbing shall be 4000 PSI 28 day strength 2" - 3" slump, (no curb deformation) 3% - 5% air-entrained, tested with RC-70 lock coat emulsion over asphalt. Provide cylinder break test - 3/500 L.F. of curbing or 1-day pour with breaks - 1 @ 7-days, 2 @ 28-days. Comply with ASTM C-31 and ASTM C-59. Also provide one slump test per 500 L.F. of curbing or 1-day pour.

Refer to project drawings for additional requirements.

PAVEMENT MARKING PAINT

Provide pavement marking as shown on the drawings. Striping shall be 4" wide. Paint shall be Sherwin-Williams Promark oil/dry traffic marking paint series B-29Y2 or approved equal. Paint shall be applied in two coats achieving a minimum dry film thickness of 15 mils. In all cases, the marking shall be sufficient to totally cover the pavement.

SITE LAYOUT NOTES

In the preparation of these site drawings, ADS has relied solely on an owner furnished survey and as such ADS does not assume responsibility for correctness of that information.

PROPERTY LINE STAKEOUT

All property lines shall be marked for rough location with colored surveyor flagging tape.

All property corners shall be rough pinned with 2" high metal rod or equivalent and flagged with surveyor tape at completion of rough grading and maintained throughout course of work.

Rough location shall mean accurate within 2' horizontally. Do not err outside property line in any case.

SITE SURFACING STAKEOUT

Site dimensions shown on-site plan are nominal dimensions only intended for use in determining approximate site locations. All site construction layout shall be verified prior to construction.

A surveyor licensed in the state of the project location must be used in locating all site related features before work is begun on site construction for a given trade. ADS shall be notified by the surveyor upon completion of this work.

FOUNDATION AS-BUILT

A "foundation location plan" must be prepared by that surveyor and submitted for ADS's review as soon as all foundation work is up to floor level.

SITE WORK STAKEOUT

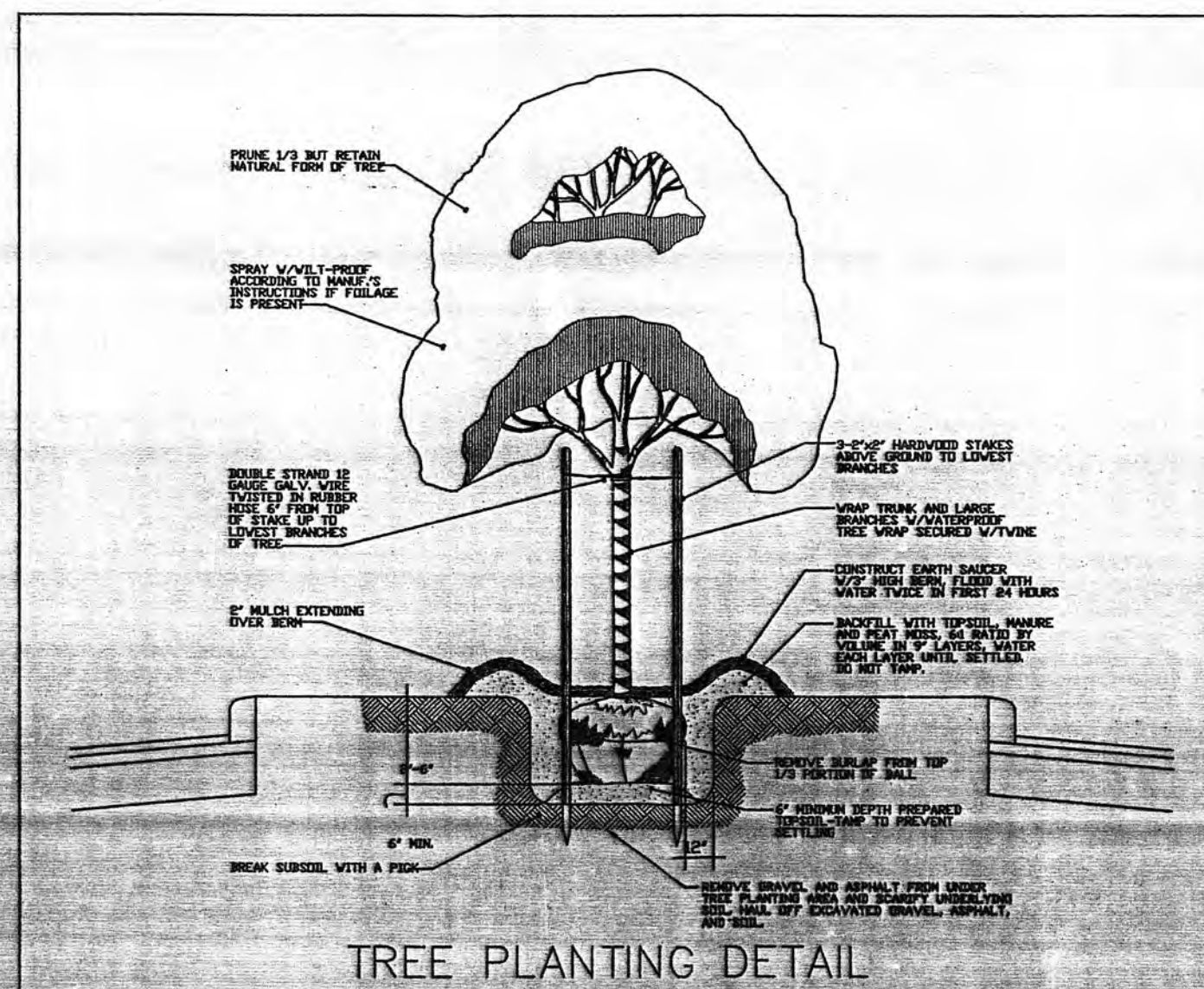
Consult ADS for all dimensions and other items labeled "verify" or "field verify" prior to installation of that work or any related work.

CONSTRUCTION NOTES:

- 1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING THE AREAS AND CONDITIONS UNDER WHICH THE PROJECT IS TO BE CONSTRUCTED AND NOTIFY THE ENGINEER OF ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK.
- 2) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, M.U.T.C.D. AND THE LOCAL SUBDIVISION REGULATIONS, AS APPLICABLE.
- 3) THE CONTRACTOR SHALL PROTECT BENCH MARKS, PROPERTY CORNERS AND ALL OTHER SURVEY MARKERS FROM DAMAGE AND/OR DESTRUCTION.
- 4) ALL SIGNS, PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND "THE AMERICANS WITH DISABILITIES ACT", AS APPLICABLE.
- 5) THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE CITY/TOWN/COUNTY, APPLICABLE UTILITY COMPANIES, OTHER CONTRACTORS PERFORMING WORK AT THE SITE, AND THE OWNER, AS APPLICABLE.
- 6) ALL DIMENSIONS ARE REFERENCED TO THE FACE OF CURB UNLESS OTHERWISE INDICATED.
- 7) ASPHALT PARKING LOT SHALL BE STRIPED WITH 4" WIDE PAINTED WHITE LINES AS INDICATED. PAINT STRIPING IN RIGHT-OF-WAY SHALL MEET TDOT & MUTCD STANDARDS.
- 8) LANDSCAPING SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL AND STATE ZONING ORDINANCE.
- 9) ALL RADI FOR LANDSCAPING ISLANDS SHALL BE AS SHOWN.
- 10) THE CONTRACTOR SHALL IDENTIFY REQUIRED LINES, LEVELS, AND DATUM PRIOR TO CONSTRUCTION.
- 11) APPALACHIA DESIGN SERVICES INC. WILL PROVIDE A DIGITAL FILE, FOR USE IN SITE LAYOUT, AS REQUIRED.
- 12) ALL CURBING SHALL BE 6" EXTRUDED EXCEPT ON R.O.W.

IMPORTANT!
GEOTECHNICAL NOTE:
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PAVING MATERIALS SCHEDULE			
THICKNESS		TYPE	
STANDARD DUTY PAVING			
AGGREGATE BASE	4"	TDOT TYPE A, CLASS A, & GRADING D	
ASPHALTIC BINDER	2"	TDOT GRADING B MODIFIED	
ASPHALTIC SURFACE	1.25"	TDOT GRADING E	
HEAVY DUTY PAVING			
AGGREGATE BASE	6"	TDOT TYPE A, CLASS A, & GRADING D	
ASPHALTIC BINDER	3"	TDOT GRADING B MODIFIED	
ASPHALTIC SURFACE	2"	TDOT GRADING E	
CONCRETE PAVING			
AGGREGATE BASE	4"	TDOT TYPE A, CLASS A, & GRADING D	
CONCRETE PAVING	6"	PCC 4000 PSI @ 28 DAYS	
(C) PAVEMENT OVERLAY			
ASPHALTIC SURFACE	2.0"	TDOT GRADING E	

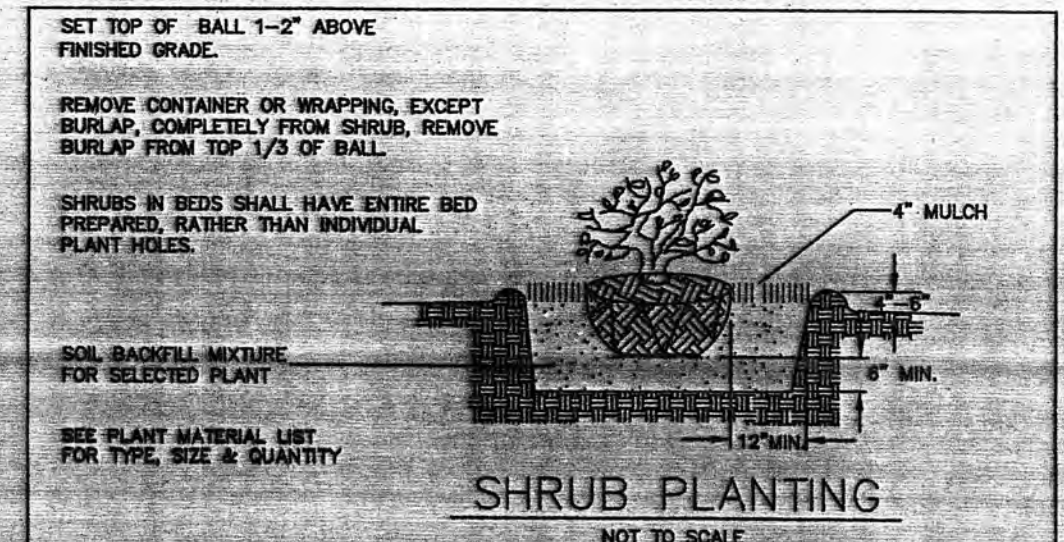


PLANT MATERIAL SCHEDULE

TREES					
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
●	12	ILEX GRENATA	COMPACTA HOLLY	3 GAL.	AS SHOWN
●	5	CERCIS CANADENSIS	RED BUD	1.5" CAL.	AS SHOWN

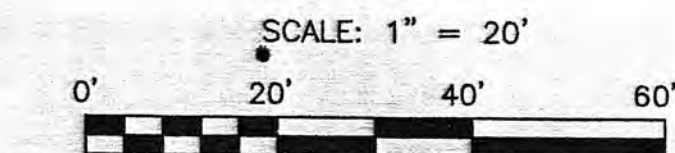
TOPSOIL PLACEMENT NOTE:

TOPSOIL TO BE SELECT GRADED TOPSOIL PLACED TO ACHIEVE A LAWN QUALITY FINISH.



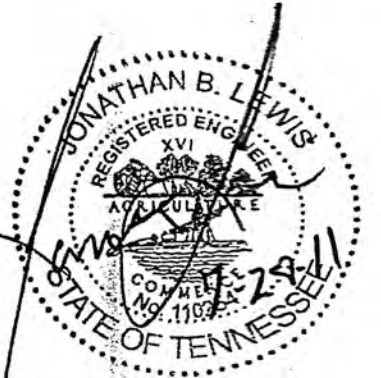
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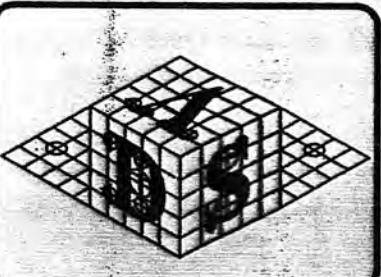
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PROPOSED GAS-N-GO FOR FOOD CITY
HARRIMAN, TENNESSEE
SURFACING / LANDSCAPING PLAN

Appalachia Design Services Inc.
245 Birch Street
Blountville, Tennessee 37617
Phone: (423) 923-1206 Fax: (423) 923-1065
Company Contacts:
timmykendall@adsd.com
jwells@adsd.com
stevehemby@adsd.com
jeffcasey@adsd.com
savannat@adsd.com
chrislittle@adsd.com
heatherpugh@adsd.com
jasminthom@adsd.com



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