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<th>Item</th>
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<tr>
<td>3230.55</td>
<td>6&quot; X 6&quot; X 3/16&quot; STEEL POST WITH ORNAMENTAL IRON</td>
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<td>3230.51</td>
<td>CAST-IN-PLACE CONCRETE RETAINING WALL</td>
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<td>3370.09</td>
<td>COPPER GROUND ROD (8'-0&quot; LONG)</td>
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<td>3370.01</td>
<td>POWER POLE</td>
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<tr>
<td>3340.18</td>
<td>GEOTEXTILE; TURN UP AT EDGES</td>
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<tr>
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<td>STORM WATER DETENTION POND (RE: CIVIL)</td>
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<td>3290.15</td>
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<td>MOTORIZED CHAIN LINK GATE</td>
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<td>CANE BOLT FROM 5/8&quot; SS ROUND BAR</td>
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<td>3230.61</td>
<td>1/2&quot; WEEP HOLES @ 48&quot; O.C.</td>
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<td>2 1/2&quot; DIAMETER SCHEDULE 40 STEEL PIPE</td>
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<td>6'-0&quot; NOM. CHAIN-LINK FENCE</td>
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<td>3/4&quot; DOWEL @ 12&quot; O.C.</td>
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<td>CONCRETE CURB RAMP PER CITY REQUIREMENTS</td>
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**Division 32 - Exterior Improvements**

- 3120.04 | EARTH |
- 3120.03 | COMPACTED SUBGRADE |
- 3120.01 | GRADE |

**Division 31 - Earthwork**

- 2810.09 | SLIDING GATE OPERATOR |
- 2810.03 | CARD READER |

**Division 28 - Electronic Safety & Security**

**Division 27 - Communications**

**Division 26 - Electrical (RE: Electrical)**

**Division 22 - Plumbing (RE: Plumbing)**

**Division 21 - Fire Suppression (RE: Plumbing)**

**Division 14 - Conveying Equipment**

**Division 13 - Special Construction**

**Division 12 - Furnishings**

**Division 11 - Equipment**

**Division 10 - Specialties**

**Division 09 - Finishes**

- 0990.03 | POWDER COATING |
- 0990.02 | ELASTOMERIC COATING |

**Division 08 - Openings**

- 0790.01 | SEALANT WITH BACKER ROD AS REQUIRED |

**Division 07 - Thermal & Moisture Protection**

**Division 06 - Wood, Plastics, & Composites**

**Division 05 - Metals**

- 0550.33 | METAL LADDER |
- 0550.30 | 1/4" STEEL PLATE |
- 0550.19 | 6" PIPE BOLLARD. FILL WITH CONCRETE |
- 0550.11 | 4" X 4" X 1/4" STEEL TUBE |

**Division 04 - Masonry**

**Division 03 - Accessory Items**

**Division 02 - Existing Conditions (To Remain, U.N.O.)**

**Division 01 - General Requirements**

**The Master Keynote List Uses CSI MasterFormat 2016 Edition**
NOTE: INFORMATION ABOUT THE SITE WAS TAKEN FROM PLANS PREPARED BY GESSNER ENGINEERING, LLC. THIS SURVEY IS FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING INFORMATION AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFYING ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF EXISTING AND NEW UTILITIES. FOR INFORMATION ONLY.
CIVIL ENGINEERING PLANS FOR
NEW BRAUNFELS FIRE TRAINING SITE INFRASTRUCTURE
A-154 SUR-34 H FOSTER, ACRES 35.452, LAND ONLY
TYPE 3 (NON-RESIDENTIAL DEVELOPMENT)
GESSNER ENGINEERING PROJECT NO. 20-0404
NEW BRAUNFELS, TX

OWNER: NEW BRAUNFELS UTILITIES
ADDRESS: 353 FM 306 (Training Facility)
NEW BRAUNFELS, TX 78130

CONTACT INFORMATION:
ADAM MICHE
CAPITAL PROJECTS MANAGER
550 LANDA STREET
NEW BRAUNFELS, TX 78130
(830) 221-4079
AMICHIE@NBTEXAS.ORG

NOTE:
GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS.
FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

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<td>C10.5</td>
<td>EROSION CONTROL DETAILS</td>
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PREPARED BY:

NOTE: FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.
CUT SHEETS CERTIFIED BY A LICENSED SURVEYOR SHALL BE PROVIDED AS THEY BECOME AVAILABLE PRIOR TO PLANS.

4. CONSTRUCTION.

1. D. SANITARY SEWER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT TCEQ REGULATIONS, CHAPTER 217, SANITARY PRECAUTIONS, FLUSHING, DISINFECTION PROCEDURES, AND MICROBIAL SAMPLING SHALL BE AS PRESCRIBED OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS.

8. VEGETATION, THE CONTRACT/DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. TESTING PER TEX-128-E WILL BE REQUIRED AT THE CITY'S REQUEST.

10. CLEAN-OUT INSTALLATIONS MUST PASS ALL APPLICABLE TESTING REQUIREMENTS OUTLINED FOR GRAVITY COLLECTION STRUCTURES. CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO ANY MODIFICATIONS.

11. LANDSCAPE AREAS-PER THE LANDSCAPE PLAN, CONTRACTOR IS RESPONSIBLE FOR WATERING, MAINTENANCE, AND OUTLET PIPES.

12. PLANTED AREA WITH UNIFORM COVERAGE OF GRASS GREATER THAN 1" IN HEIGHT WITH NO BARE SPOTS GREATER THAN LESS THAN FIFTY YEARS. IF A PIPE OR AN INTEGRAL STRUCTURAL COMPONENT OF A PIPE WILL DETERIORATE WHEN FROM THE OUTSIDE SURFACE OF EACH OF THE RESPECTIVE PIECES. IF NINE FEET OF SEPARATION CANNOT BE MET, LOCAL JURISDICTIONAL REGULATIONS, AND IN ACCORDANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE.

16. DIMENSION CONTROL NOTES: UNLESS OTHERWISE NOTED ON THE PLANS, CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL INSTALL EROSION CONTROL MEASURES.

20. GENERAL UTILITY NOTES: MILLING, MIXING, AND CRUSHING OF EXISTING PAVEMENT AND/OR BASE MATERIAL SHALL BE DONE SO THAT A UNIFORM DENSITY TEST FOR EACH LIFT (1 TEST PER 5,000 SF OF AREA) WITH A MINIMUM OF THREE (3) TEST BEING PERFORMED WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO THE CONTRACTOR SHALL MAINTAIN EROSION CONTROL THROUGHOUT CONSTRUCTION PERIOD AND UNTIL GRASS IS WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°F. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE CEMENT OR LIME HAS DRYED.

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THE CONTRACTOR WILL PROVIDE ADVANCE NOTIFICATION TO THE ENGINEER OF IMPENDING/UPCOMING LANE & CONSTRUCTION POLICY.

7. INCLUDING METAL BEAM GUARD FENCE OR CABLE BARRIER MOW STRIPS. EXTENDED, THE PORTION TO BE REMOVED WILL BE NEATLY SAW-CUT PRIOR TO REMOVAL AND THE NEW RIP-RAP WILL BE

6. THE ROW DEDICATION, LEAVING IT IN AN AESTHETICALLY PLEASING CONDITION. THE AREA OF ROW DEDICATION WILL NOT

5. WORK NEAR AERIAL ELECTRICAL LINES OR UTILITY POLES, COMPLY WITH FEDERAL, STATE AND LOCAL

4. BEING PERFORMED WITHIN 400 FEET OF AN EXISTING SIGNALIZED INTERSECTION, FLASHING BEACON OR SCHOOL ZONE

3. FOLLOW THE REQUIREMENTS OF THE TEXAS AGGREGATE QUARRY AND PIT SAFETY ACT. IN ADDITION, IT IS REQUESTED

2. THESE AREAS NOT BE VISIBLE FROM ANY HIGHWAY ON THE STATE SYSTEM.

1. REGARDLESS OF ERRORS AND OMISSIONS IN INFORMATION PROVIDED IN THE PLANS OR CROSS-SECTIONS THE

45. PRIOR TO SEEDING OR RE-VEGETATION THE FRONT SLOPES WILL BE SHOULDERED UP WITH TOPSOIL TO ELIMINATE ANY

34. AS SHOWN ON THE CURRENT STATE STANDARD FOR PEDESTRIAN FACILITIES. COLOR CONTRAST AND TEXTURING OF

20. ALL MANHOLES OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE

16. WASTEWATER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF

15. E. OF THE WORK.

13. PROOF ROLLING OF SUBGRADE IS REQUIRED AND SHALL BE WITNESSED BY TXDOT PRIOR TO PLACEMENT OF PAVEMENT

20. ANY AREAS DEVOID OF TACK. ASPHALT FOR TACK COAT SHALL MEET TXDOT SPECS AND BE FROM A TXDOT APPROVED

12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

6. CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST

11. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING

20. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND A CLEANOUT

20. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING

20. PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SPECIFICATIONS.

20. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE.

15. B. ALL FLEXIBLE BASE WILL HAVE A MINIMUM PLASTICITY INDEX OF 4.

13. WATER QUALITY SHALL BE PROTECTED WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL

12. VALVE AND EXIT AT THE VALVE BOX. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE.

9. CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING

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STORM SEWER PLAN

that the placement of fill material has been completed in accordance with the plans. Additional

Every other service line. Upon completion of testing the Geotechnical Engineer shall provide the

of required tests shall be determined by the Geotechnical Engineer and approved by the City of

REF. ESCALANTE APARTMENT PLANS FOR DETAILS

layers not to exceed twelve inches (12") loose. Determine the maximum lift thickness based on

MATCH LINE

INSTALL:

1 - 45° HORIZONTAL BEND

EXISTING ELECTRIC DUCT BANK

TOP=678.12'

18" RCP @ 0.97%

EXISTING  POWER POLE

TOP=678.20'

18" RCP @ 0.50%

EXISTING PUMP BAY

TOP=680.17'

18" RCP @ 0.60%

EXISTING SANITARY SEWER LINE

18" RCP @ 0.47%

EXISTING OVERHEAD ELECTRIC LINE

18" RCP @ 0.47%

EXISTING BUILDING

TOP=679.66'

1 - 4' X 4' FOUR WAY AREA INLET

TOP=677.00'

1 - 30' CURB INLET

E:2258905.93

N:13816316.87

TOP=674.27

18" RCP @ 0.60%

EXISTING FIRE LANE

TOP=676.19'

30" RCP @ 0.60%

EXISTING 6" CONCRETE PAVEMENT

TOP=680.50'

18" RCP @ 0.60%

PROP. 15' P.U.E.

10,570 S.F.
that the placement of fill material has been completed in accordance with the plans. Additional City of New Braunfels Street Inspector with all testing documentation and a certification stating layer of material shall be compacted to a minimum 95% density and tested for density and moisture.

All utilities to be constructed prior to streets.

REVISION

EXISTING WATER VALVE TYP WV

EXISTING CLEAN OUT

MATCH LINE

EXISTING BOLLARD

EXISTING GUY WIRES

MANHOLE

EX. / PROP. STORM SEWER

EX. / PROP. LIGHT POLE

EX. / PROP. TREE

EXISTING PAVEMENT EDGE

EXISTING PROPERTY LINE

EXISTING FENCE CHAIN LINE

VISIBLE GRADE MARKERS

EXISTING SANITARY SEWER LINE

EXISTING PAVEMENT

EXISTING PROPERTY LINE

EXISTING SANITARY SEWER LINE

EXISTING PAVEMENT

EXISTING FENCE CHAIN LINE

EXISTING SANITARY SEWER LINE

EXISTING PAVEMENT

EXISTING FENCE CHAIN LINE

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EXISTING FENCE CHAIN LINE

EXISTING SANITARY SEWER LINE

EXISTING PAVEMENT

EXISTING FENCE CHAIN LINE

EXISTING SANITARY SEWER LINE

EXISTING PAVEMENT
Density tests may be requested by the City of New Braunfels Inspector. At a minimum, tests shall be taken every 200 LF for each lift and layer of material shall be compacted to a minimum 95% density and tested for density and moisture to verify the ability of the compacting operation and equipment used to meet the required density. Each lift shall be compacted to a minimum 95% density and tested.

C5.2

EXISTING WATER VALVE

EXISTING CLEAN OUT

EXISTING 12" AND 2" STORM SEWER

EXISTING LIFT STATION AND PUMPS TO REMAIN.

ALT. No. 5: EXISTING 12" AND 2" STORM SEWER

NEW BRAUNFELS FIRE TRAINING SITE
FIRE STATION No. 7
NEW BRAUNFELS, TX 78130
353 & 357 FM 306

PUMPS ARE TO REMAIN

ALT. No. 3: EXISTING LIFT STATION

ALT. No. 4: EXISTING 12" AND 2" STORM SEWER

NOTE:

CONTACT GESSNER ENGINEERING CONSTRUCTION.

PROVIDERS TO LOCATE EXISTING UTILITIES PRIOR TO PROCEEDING.

1. All plans are for conceptual purposes only and may be subject to change.
2. No values, capacities, guarantees, etc. shall be construed as an assurance of performance or inability to produce a completed project as designed. The contractor shall be responsible for completing the project as designed, and the owner shall be responsible for malfunction or failure of any system or equipment. The contractor shall be responsible for the proper installation and performance of all systems, equipment, and materials. The contractor shall be responsible for all warranties and guarantees of performance and materials. The contractor shall be responsible for the proper installation and performance of all systems, equipment, and materials. The contractor shall be responsible for the proper installation and performance of all systems, equipment, and materials. The contractor shall be responsible for the proper installation and performance of all systems, equipment, and materials.
DATA AND CALCULATIONS FOR POE-2A WAS UTILIZED FROM THE ESCALANTE APARTMENTS PERMITTED PLAN SET.

SOILS IN THE AREA OF ANALYSIS HAVE BEEN DETERMINED TO BE HYDROLOGIC GROUP D (NRCS WEB SOIL

NOTES:
1. DESIGN ANALYZED CONSISTS OF THE CITY OF NEW BRAUNFELS DRAINAGE AND INUNDATION STUDY BASED ON 1% INUNDATION GROSS.
2. STORMWATER FLOW HAS BEEN DETERMINED TO HYDROLOGIC GROUP D DRAINAGE (SHORT).
SOILS IN THE AREA OF ANALYSIS HAVE BEEN DETERMINED TO BE HYDROLOGIC GROUP D (NRCS WEB SOIL DATABASE)

NEW BRAUNFELS Firestore STATION NO. 7- ULTIMATE DEVELOPED HYDROLOGIC CALCULATIONS (SCS/NRCS)

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CONTACT GESSNER ENGINEERING FOR A COMPLIANT LID DESIGN AND EROSION CONTROL DESIGN. (1-512) 316-9885

CAUTION: CONTACT TEXAS 811 AND LOCAL UTILITY PROFESSIONAL PROVIDERS TO LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION.
NOTES:
1. SEE PLAN FOR JOINT SPACING, COMPRESSIVE STRENGTH, PAVEMENT THICKNESS, AND REINFORCING.
2. DEPTH OF STABILIZATION SHALL BE A MINIMUM OF 6 INCHES OR BASED ON GEOTECHNICAL RECOMMENDATIONS SUBGRADE CONDITIONS.
3. SUBGRADE STABILIZATION SHALL BE PER GEOTECHNICAL RECOMMENDATIONS AND LIME/CEMENT SERIES BASED ON ACTUAL SUBGRADE CONDITIONS.

CONCRETE PAVEMENT

1/2" BITUMINOUS EXPANSION JOINT FILLER

METAL OR PLASTIC CAP, INSIDE DIAMETER TO BE 1/16" GREATER THAN DIAMETER OF DOWEL BAR. CAP MUST BE LONG ENOUGH TO COVER 1/2" OF DOWEL AND HAVE STOP SO END OF CAP IS 1" FROM END OF BAR.

COMPACTED SUBGRADE PER SPECIFICATIONS

NOTES:
1. GRANULAR BACKFILL SHALL MEET THE SPECIFICATIONS OF TXDOT TYPE A.
2. ONSITE MATERIAL FOR FILL SHALL BE FREE OF DEBRIS AND GRAVEL LARGER THAN 2" IN DIAMETER.
3. UNDER PAVED AREAS, ONSITE FILL SHALL BE STABILIZED AS REQUIRED BY THE GEOTECHNICAL ENGINEER. BACKFILL SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
4. UNDER NON-PAVED AREAS, ONSITE FILL MAY BE USED AND SHALL BE COMPACTED IN 10" LIFTS TO 90% STANDARD PROCTOR DENSITY.
NOTE:
1. MINIMUM CONCRETE 28-DAY COMPRESSIVE STRENGTH SHALL BE 4,000 PSI.
2. CLEAR COVER TO REINFORCEMENT SHALL BE 3" MIN., TYP.
3. RETAINING WALL IS DESIGNED TO RESIST IN SERVICE CONDITIONS. CONTRACTOR SHALL TAKE CARE TO BRACE THE WALL DURING CONSTRUCTION SHOULD HEAVY DUTY EQUIPMENT BE UTILIZED AT THE RETAINED SIDE OF THE WALL.
**Details**

**Erosion Control**

**100% CD**

**C10.5 Concrete Washout Detail**

**Section B-B**

- 10 MIL PLASTIC LINING
- TWO STAKES NO. ENTIRE PERIMETER WITH STAKE (TYP.) FASTENED AROUND WOOD FRAME SECURELY

**Revision**

**Varies**

Washout area to support expected construct entry road and bottom of date directed by the project specifications.

**Rough Wood Frame**

Compact to in-situ conditions, or as filled with clean fill material and two-stacked 2x12 disposed of. Below grade pits shall be of offsite. Materials used to construct required for work, the hardened when washout facilities are no longer free of holes, tears, or other defects. Plastic lining material will be minimum of section A-A or replaced once the washout is 75% full.

**Temporary Concrete Washout Facilities**

Will be constructed and maintained.

**Sanbag**

Contain all liquid and concrete waste in sufficient quantity and size to generate by washout operations.

**Filter Fabric**

Not to be placed on compacted back fill.

**Sandbag**

Dumpy on-site. Except in designated areas will be located at least 50 feet from water bodies as determined in the site with the largest construction vehicle tire, whichever is greater.

**Notes:**

- **Number:**
- **Date:**
- **Checkered by:**
- **WATFORD ARCHITECTS, INC.**

**Corporate Office**

2501 Ashford Drive

www.gessnerengineering.com

**Firm Registration Number:**

TBPE F-7451, TBPLSF-10193910

(SEE NOTE 1)
NOTES:
1. WELD ALL PIPE CONNECTIONS.
2. GATE FABRIC TO MATCH FENCE FABRIC.
3. NOTCH CURBS TO MAINTAIN 4" HEIGHT BETWEEN BOTTOM OF GATE AND PAVING.
4. PROVIDE GATE KEEPERS.

KEYNOTES
0330.07 CONCRETE FOOTING (RE: STRUCTURAL)
0550.19 6" PIPE BOLLARD. FILL WITH CONCRETE
0550.33 METAL LADDER
0870.12 PANIC HARDWARE DEVICE
2810.09 SLIDING GATE OPERATOR
3210.30 6" CONCRETE CURB (WITH GUTTER AS REQUIRED) (RE: CIVIL)
3230.01 6'-0" NOM. CHAIN-LINK FENCE
3230.06 4'-0" WIDE CHAIN-LINK GATE
3230.10 2 1/2" DIAMETER SCHEDULE 40 STEEL PIPE (GALVANIZED)
3230.11 6 5/8" DIAMETER STEEL PIPE (GALVANIZED)
3230.17 CHAIN-LINK FABRIC (VINYL COATED)
3230.28 HEAVY DUTY OFFSET TYPE HINGES
3230.33 GATE ROLLER
3230.35 POST CAP
3230.56 VEHICLE DETECTION LOOP
3340.05 CONCRETE CATCH BASIN (RE: CIVIL)
**DRIVING COURSE SKILLS**

1. **OFFSET ALLEY COURSE**
   - Provide 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "red".

2. **STRAIGHT LINE COURSE**
   - Provide 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "black".

3. **DIMINISHING CLEARANCE COURSE**
   - Provide 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "yellow".

4. **CONFINED SPACE COURSE**
   - Provide 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "blue".

5. **FOR SERPENTINE COURSE PROVIDE**
   - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "green".

6. **FOR STRAIGHT LINE COURSE PROVIDE**
   - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "black".

7. **FOR CONFINED SPACE COURSE PROVIDE**
   - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "blue".

8. **FOR OFFSET ALLEY COURSE PROVIDE**
   - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "red".

9. **FOR DIMINISHING CLEARANCE COURSE PROVIDE**
   - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
   - Solid circles, color "yellow".

10. **FOR CONFINED SPACE COURSE PROVIDE**
    - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
    - Solid circles, color "blue".

11. **FOR SERPENTINE COURSE PROVIDE**
    - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
    - Solid circles, color "green".

12. **FOR STRAIGHT LINE COURSE PROVIDE**
    - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
    - Solid circles, color "black".

13. **FOR DIMINISHING CLEARANCE COURSE PROVIDE**
    - 6" diameter painted circles @ 10'-0" o.c. in pattern shown above.
    - Solid circles, color "yellow".

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**PROpane TANK**

- **CONCRETE PAD**
  - Sloped to drain at a minimum of 1/4" per linear foot.
  - Finished surface of pad to be 2" above adjacent grade.
  - Refer to civil.

- **UNDERGROUND POLYETHYLENE SUPPLY LINES**
  - Installed in strict accordance with the current editions of the IBC and NFPA.

- **CONTRACTOR SHALL PROVIDE FINAL CONNECTION AND TESTING FROM ABOVE GROUND SHUT-OFF VALVES TO TANK PORTS UPON PLACEMENT OF TANK.**
  - Piping shall be as follows:
    - For vapor lines (top of tank) 3" diameter supply.
    - For liquid lines (bottom of tank) 1" diameter supply.

**PERIMETER FOOTING**

- **2-#4 BARS**
  - Proprietary to contractor.

**GENERAL NOTES**

1. 2,000 GALLON PROPANE TANK TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR, INCLUDING ALL REQUIRED AGENCY PERMITS AND APPROVALS.

2. CONTRACTOR TO CONFIRM PHYSICAL TANK SIZE WITH PROVIDER PRIOR TO PLACEMENT OF SHOWN UTILITY PAD.

3. ONLY FULL-PORT SHUT-OFF VALVES AT POINTS OF TERMINATION FOR PROPANE LINES SHALL BE USED. SET SHUT-OFF VALVES INSIDE THE AREA OF UTILITY PAD.

4. CONCRETE PAD SHALL BE SLOPED TO DRAIN AT A MINIMUM OF 1/4" PER LINEAR FOOT. FINISHED SURFACE OF PAD TO BE 2" ABOVE ADJACENT GRADE: REFER TO CIVIL.

5. INSTALLATION OF UNDERGROUND POLYETHYLENE SUPPLY LINES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE CURRENT EDITIONS OF THE IBC AND NFPA.

6. CONTRACTOR SHALL PROVIDE FINAL CONNECTION AND TESTING FROM ABOVE GROUND SHUT-OFF VALVES TO TANK PORTS UPON PLACEMENT OF TANK. PIPING SHALL BE AS FOLLOWS:
   - For vapor lines (top of tank) 3" diameter supply.
   - For liquid lines (bottom of tank) 1" diameter supply.
1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE DRAWINGS.

3. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING, REMOVAL OF MISCELLANEOUS DEBRIS, AND ANY ADDITIONAL FILL REQUIRED TO CREATE A SMOOTH CONDITION PRIOR TO PLANTING IN ALL GRASS AREAS.

4. LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER AND WEEDS AT ALL TIMES DURING CONSTRUCTION.

5. ALL QUANTITIES ON THIS PLAN ARE FOR INFORMATION ONLY. SPACING IS AS INDICATED ON 'LANDSCAPE LEGEND' (UNLESS OTHERWISE NOTED.) IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AT SPACING AS SPECIFIED IN THE 'LANDSCAPE LEGEND' REMARKS REGARDLESS OF QUANTITY INDICATED.

6. CONTRACTOR SHALL MEET OR EXCEED ALL MINIMUM SIZES LISTED IN 'PLANT SCHEDULE' INCLUDING CONTAINER SIZE.

7. UNLESS DIMENSIONED ON PLAN, TREE LOCATIONS ARE DIAGRAMMATIC. CONTRACTOR SHALL STAKE OUT ALL INFORMAL TREE LOCATIONS IN FIELD USING COLORED FLAGS FOR REVIEW & APPROVAL BY THE ARCHITECT PRIOR TO EXCAVATION. ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN FIELD.

8. CONTRACTOR SHALL CLEARLY DELINEATE SHRUB & GROUNDCOVER BED LAYOUTS FOR APPROVAL BY ARCHITECT PRIOR TO EXCAVATION.

9. ALL SHRUB & GROUNDCOVER BEDS SHALL HAVE A FOUR (4") INCH MULCH Layer.

10. PROVIDE THREE INCH (3") MULCH LAYER UNDER EXISTING TREE CANOPIES TO EXTENT OF CANOPY.

11. DESIGNATED TURF AREAS TO INCLUDE SODDED, SEEDED OR SPRIGGED GRASSES. REFER TO PLAN FOR TYPE.

12. PROVIDE STEEL EDGING AT BORDERS OF ROCK GROUNDCOVER AS INDICATED ON THE DRAWINGS.

13. ALL EXISTING PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION & MUST BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY & SIZE IF DAMAGED, DESTROYED OR REMOVED OTHER THAN AS INDICATED ON DRAWINGS.
1. Contractor is responsible for verifying locations of underground utilities prior to construction.

2. It is the responsibility of the contractor to advise the architect of any condition found on the site which prohibits installation as shown on these drawings.

3. Landscape contractor shall be responsible for fine grading, removal of miscellaneous debris, and any additional fill required to create a smooth condition prior to planting in all grass areas.

4. Landscape areas shall be kept free of trash, litter and weeds at all times during construction.

5. All quantities on this plan are for information only. Spacing is as indicated on 'landscape legend' (unless otherwise noted). It is the contractor's responsibility to provide full coverage in all planting areas at spacing as specified in the 'landscape legend' remarks regardless of quantity indicated.

6. Contractor shall meet or exceed all minimum sizes listed in 'plant schedule' including container size.

7. Unless dimensioned on plan, tree locations are diagrammatic. Contractor shall stake out all informal tree locations in field using colored flags for review & approval by the architect prior to excavation. Architect reserves the right to adjust plants to exact location in field.

8. Contractor shall clearly delineate shrub & groundcover bed layouts for approval by architect prior to excavation.

9. All shrub & groundcover beds shall have a four (4") inch mulch layer.

10. Provide three inch (3") mulch layer under existing tree canopies to extent of canopy.

11. Designated turf areas to include sodded, seeded or sprigged grasses. Refer to plan for type.

12. Provide steel edging at borders of rock groundcover as indicated on the drawings.

13. All existing plant material shall be maintained in a healthy growing condition & must be replaced with plant material of similar variety & size if damaged, destroyed or removed other than as indicated on drawings.
ELECTRICAL ONE-LINE DIAGRAM

**ONE-LINE DIAGRAM GENERAL NOTES:**

A. All conductors shall be copper unless otherwise noted. For ampacities greater than 100A aluminum conductors may be substituted for copper conductors. Electrical contractor shall assume responsibility for re-sizing conductors and conduit per applicable National Electric Code Articles.

B. Standby generator is estimated to be 300kVA and may be subject to change. Coordinate final transformer kVA and kVAIC rating with utility prior to purchasing any electrical equipment.

C. Square tags refer to fault current values located on this page.

D. Lift pump to be provided with 6-pulse VFD, type: ABB model: ACQ580.

E. Automatic transfer switch CUMMINS 480/277V, 800A, 3Ø, 3-pole NEMA 3R.

F. Prior to purchase, contractor to coordinate ATS lug size with manufacturer. If manufacturer is unable to provide required lugs, ATS to be upsized as required.

G. Label switch with a permanent placard with 1" text indicating function and device controlled.

**ONE-LINE DIAGRAM KEYED NOTES:**

#1. Stand-by generator is estimated to be 300kVA and may be subject to change. Coordinate final transformer kVA and kVAIC rating with utility prior to purchasing any electrical equipment.

#2.PRIOR TO PURCHASE, CONTRACTOR TO COORDINATE ATS LUG SIZE WITH MANUFACTURER. IF MANUFACTURER IS UNABLE TO PROVIDE REQUIRED LUGS, ATS TO BE UPSIZED AS REQUIRED.

#3. LABEL SWITCH WITH A PERMANENT PLACARD WITH 1" TEXT INDICATING FUNCTION AND DEVICE CONTROLLED.

**Fault Current Calculations**

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**FEEDER SCHEDULE**

- 800.4VD
  - 800A/3P #1/0 CU GND
  - 800A/3P #2 CU GND

- 400.3
  - 3Ø, 4W
  - 3Ø, 4W

- 400.4
  - 2" X 3" CONDUCTORS BY NBU.