

DRAFT Construction Best Management Practices Plan for:

New Commissary Facility
Maxwell AFB – Gunter Annex
Montgomery, AL

Facility Operators:

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Estimated Project Construction Dates:

Start of Construction: August 2011
Completion of Construction: February 2013

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 *Project/Site Information*

Project/Site Name: **New Commissary Facility, Maxwell AFB-Gunter Annex**

Project Street/Location: **North Turner Boulevard @ Congressman William Dickinson Drive**

City: **Montgomery** State: **Alabama** Zip Code: **36114**

County or Similar Subdivision: **Montgomery County**

Latitude/Longitude (Use **one** of three possible formats, and specify method)

Latitude:

Longitude:

1. **32° 24' 38" N** (degrees, minutes, seconds)

1. **86° 14' 43" W** (degrees, minutes, seconds)

Method for determining latitude/longitude:

USGS topographic map (specify scale: _____) EPA Web site GPS

Other (please specify):

Is the project located in Indian country? Yes No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." N/A

Is this project considered a federal facility? Yes No

SPDES project or permit tracking number: (to be assigned)

(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate SPDES construction general permit.)

1.2 Contact Information/ Responsible Parties

Project Information:

Operators:

Defense Commissary Agency (DeCA)
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Project Manager or Site Supervisor:

To be determined

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1.3 Nature and Sequence of Construction Activity

The proposed construction will consist of a new single story building of approximately 46,000 square feet. The new building will be located west of North Turner Boulevard and south of Congressman William Dickinson Drive, directly east of the existing Commissary and will face south. The eastern portion of the existing Commissary building will be demolished after construction of the new facility is complete in order to provide the required parking capacity and accessibility to the rear truck receiving area of the new Commissary. The project site is bounded to the north by a walking trail along the south side of Congressman William Dickinson Drive, to the east by North Turner Boulevard, to the south by a mini-mall at the northeast corner of Spaatz Street and North Turner Boulevard, and to the west by the existing Commissary and Fitness Center buildings.

The soil disturbing activity associated with this project will include removal of existing pavement, sidewalk, and reinforced tarmac pavement, existing tennis court equipment, some minor stripping of topsoil, installing stabilized construction entrances, installing erosion and sediment control measures, the building demolition and construction, reconstructing the existing

parking lot, driveways, a truck loading area, site grading, and excavation for utilities. The site of the new Commissary has been previously developed, and contains significant impervious areas. The new Commissary development will increase the area available for pervious cover, and two large, shallow infiltration basins will be constructed on the east and west sides of the proposed building. The basins will serve as a permanent BMP to reduce and filter stormwater runoff and encourage infiltration within the soil. In general, the mass grading to be completed will involve minor cutting and filling, demolition of existing tarmac and parking lot pavement construction of the building pad, and parking lot and roadway base courses. After completion of these items, permanent landscape restoration will be installed on all remaining pervious areas which were disturbed during construction.

What is the function of the construction activity?

Residential Commercial Industrial Road Construction

Linear Utility

Other (please specify): _____

Estimated Project Start Date: **August 2011**
Estimated Project Completion Date: **February 2013**

Construction must be sequenced to allow for full access and operation of the adjacent existing Commissary building during construction of the new building and main parking area. This sequencing of construction will also minimize the exposure time of cleared surface areas and prevent exposing excess bare earth during construction. The Contractor is to coordinate the phased work and interface the pollution prevention plan to maintain continuous pollution prevention. Structural BMPs may be removed once the upstream drainage areas have been permanently stabilized. Stabilization shall be accomplished by temporarily or permanently protecting the disturbed soil surface from rain fall impacts and runoff. The sequence provided below is a generalized order of construction required to ensure measures are in place to maintain pollution prevention. See the Staging Plan (sheets C2.2-C2.5) in Appendix B for further detail.

- 1.) Prior to any construction activity, a preconstruction meeting must be held with Maxwell AFB – Gunter Annex personnel, the Applicant, and the Applicant’s construction representative.
- 2.) Construction staging and material storage areas will be established including the construction of the temporary concrete washout area.
- 3.) Prior to any construction activity, construction BMPs including a stabilized construction entrance, perimeter silt fence, and drop inlet protection must be established as indicated on the Erosion Control Plan.
- 4.) Complete site clearing. Any disturbed slopes in excess of 3 horizontal to 1 vertical in areas where construction activity will cease for more than 14 days must be stabilized with erosion blankets and silt fence.

- 5.) Rough grade site and install utilities, storm conveyance system, sanitary sewer and water connections and begin the building construction. Install additional BMPs for new storm facilities as indicated on the Erosion Control Plans. Construction chain link fence must be installed and maintained around the site perimeter to provide security during construction.
- 6.) Finish grade building and truck dock area and construct asphalt parking areas, access drives, concrete loading docks, sidewalks, and curbs and gutters.
- 7.) Finalize grading operations, install final stabilization including permanent seeding in all disturbed areas. Remove temporary erosion control facilities when disturbed areas tributary to the facilities have been completely stabilized.
- 8.) Post Construction: Monitor stabilized areas for three months.
- 9.) Estimated Beneficial Occupancy Date: February 2013

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type:

The soil borings performed in February 2010 by Carmichael Engineering, Inc. indicate surficial conditions consisting of approximately 2 inches of asphalt pavement, 6 to 7 inches of concrete pavement, or 2 to 3 inches of organic clayey sandy and sandy topsoil. Beneath the topsoil and concrete or asphalt pavement, the test bores encountered fill earth typically classified as cohesive sandy clay, clayey sand, and clayey silty sand to depths of 0.5 to 2.5 feet. Beneath the fill layer, the in-situ earth encountered was classified as cohesive clayey sand, clayey silt sand, and non-cohesive silty sand and medium sand with varying amounts of gravel. Penetration resistance test values ranged from 0 to 44 blows per foot indicating relative densities of very loose to dense in the predominate sand earth and firm in the predominate clay earth. The test bores did not indicate any ground water during drilling. Two bores indicated water levels at depths of 23.3 to 24.5 feet below existing grade 24 hours after drilling.

An NRCS Soil Survey indicated soil ratings within the vicinity of the project site as Amite fine sandy loam, level phase, Hydrologic Soil Group B.

Slopes:

The existing overall topography of the site is gently rolling and generally consists of paved parking areas with slopes varying from 1% to 2%. Current elevations across the site range from 211 to 215 feet. The site currently slopes toward several storm inlets located along two parallel north-south storm sewer lines that slope north from the site. The new Commissary building will be constructed approximately 4 feet above existing grade, and upon completion, the site will drain away from the building in each direction.

Drainage Patterns:

Storm water from the new Commissary site is currently served by an enclosed drainage system consisting of a series of inlets and storm sewers within the existing tarmac that drains north, then

west from the site towards an outfall to Three Mile Branch Creek, a perennial stream tributary to Galbraith Mill Creek, which eventually discharges into the Alabama River. The majority of the site proposed for construction is currently impervious. There is no apparent detention or storm water quality facility currently provided on the project site.

Storm water from the roof area of the new Commissary building will be collected in an enclosed drainage system and conveyed to infiltration basins east and west of the proposed building. Storm water runoff from the new Commissary parking area will also be conveyed to these infiltration basins via a rock-lined ditch from curb openings at each end of the parking area.

The new on-site infiltration basins have been designed to accommodate a volume of a 2-year, 24-hour storm. Any overflow from these basins will enter an enclosed storm sewer system which ties into the existing system that drains the site. Additionally, the site has been graded such that if the storm sewer system fails the 100-year rain will follow its current patterns off of the site without causing damage to any new or existing structure.

Vegetation:

Prior to a recent demolition project on the future Commissary site, approximately 30 percent of the site was pervious with grass cover. The remainder of the site was impervious area consisting of a portion of the existing Commissary building, parking areas, sidewalks, driveways, and tennis courts.

Upon completion of the project, the remaining pervious areas will be covered with dense grass, trees, and shrubs as indicated on the Landscape Plan.

Other:

N/A

1.5 Construction Site Estimates

The following are estimates of the project site characteristics before and after construction:

Construction Site Area to be disturbed:	10.5 acres
Total Project Area:	11.6 acres
Percentage impervious area before construction:	68%
SCS Runoff Curve Number before construction:	86
Percentage impervious area after construction:	49%
SCS Runoff Curve Number after construction:	79

A worksheet showing the change in runoff volume between the existing conditions and post-construction conditions for the project is located in Appendix E, as well as a site hydrograph showing the site runoff flows for each condition.

According to the worksheet, which does not incorporate the volume lost due to infiltration and evaporation, the post-construction site will generate 306,000 cubic feet of runoff less than the existing conditions based on the reduction of impervious area alone.

The hydrograph presented in Appendix E was generated using EPA SWMM 5.0, and shows a large reduction in flow from the site in the post-construction condition. The SWMM model used to generate the hydrograph for the post-construction conditions utilized the two proposed infiltration basins in the calculation of the site runoff. The peak discharge from the 11.6 acre site was reduced from approximately 17 cubic feet per second in the existing condition to approximately 5 cubic feet per second in the proposed condition.

1.6 Receiving Waters

Description of receiving waters:

A 2,000-foot section of the Gunter Annex western boundary is bounded by the Three Mile Branch Creek. This tributary is a perennial stream that flows north to join Galbraith Mill Creek and then eventually discharges into the Alabama River. The surface drainage patterns on Gunter Annex are generally from northeast to southwest towards Three Mile Branch Creek. Stormwater at the site of the new Commissary is collected in surface drains and eventually discharges into Three Mile Branch Creek.

Description of storm sewer systems:

The proposed drainage facilities for the new Commissary have been designed to store and infiltrate runoff from a 2-year, 24-hour storm, and the total pervious area of the Commissary site has been increased, resulting in a reduction of both the volume and flow rate of stormwater runoff from the existing site conditions.

Storm water from the building roof and the main parking area of the new Commissary will enter two infiltration basins on the east and west side of the proposed building. Combined, the basins can store 1.0 acre-feet of ponded stormwater. Any overflow from the basins will enter an enclosed sewer which connects to the existing 18” and 30” storm sewers that previously collected undetained and untreated runoff from the site via a number of inlets in the existing tarmac. These existing sewers outfall to Three Mile Branch Creek, a perennial stream tributary to Galbraith Mill Creek, which eventually discharges into the Alabama River. Around the perimeter of the site, stormwater from the proposed driveways and truck loading dock will enter a series of storm structures and flow via an enclosed storm sewer system toward the existing 18” and 30” storm sewers. The infiltration basin bottoms will have an amended soil and sand layer to encourage infiltration. Underdrains will also be installed within wrapped gravel at the base of a sand layer to ensure the basin will drain in the case the bottom becomes clogged. The site has been designed so that any potential overflow to this system in the event of a major storm or failure of the system will safely drain over the parking area pavement and drives without damaging any buildings.

Description of impaired waters or waters subject to TMDLs:

Three Mile Branch Creek is listed in the 2008 final list of Section 303(d) impaired waters subject to an establishment of total daily maximum loads (TMDLs) for pesticides (Dieldrin) from unknown sources from the creek’s source to Lower Wetumpka Road, a length of 7.65 miles. The 2010 list (pending EPA approval) also lists pathogens/siltation from urban development as a pollutant subject to TMDLs.

1.7 Site Features and Sensitive Areas to be Protected

Description of unique features and measures to protect them:

The site does not contain any unique features or sensitive areas to be preserved. There are trees located near perimeter of the site that will be preserved. The locations of these trees have been provided in the Erosion Control Plans and Details in Appendix B.

1.8 Potential Sources of Pollution

Potentials sources of sediment to stormwater runoff:

- Potential sources of sediment include clearing and grubbing operations, grading and site excavation operations, vehicle tracking, topsoil stripping and stockpiling, and landscaping operations.

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined staging area including fueling activities, major equipment maintenance, sanitary facilities, and hazardous waste storage.

- Materials storage area including general building materials, solvents, adhesives, paving materials, paints, aggregates, trash.
- Construction activity including paving, curb/gutter installation, concrete pouring/mortar/stucco, building construction.
- Concrete washout areas.

1.9 Endangered Species Certification

Are endangered or threatened species and critical habitats on or near the project area?

Yes No

- Describe how this determination was made:

A Finding of No Significant Impact (FONSI) from 2004 for a new Fitness Center that was to be located on the site of the new Commissary concluded that there are no endangered, protected or threatened species occurring in, on, or near the proposed site. The FONSI is located in Appendix L.

- If yes, describe the species and/or critical habitat: N/A
- If yes, describe or refer to documentation which determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are present on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service. Please contact a state or tribal official for concerns related to state or tribal listing of species.): N/A

1.10 Historic Preservation

Are there any historic sites on or near the construction site?

Yes No

- Describe how this determination was made:

A Finding of No Significant Impact (FONSI) from 2004 for a new Fitness Center that was to be located on the site of the new Commissary concluded that the proposed construction would take place in an area previously disturbed by an urban development, of which no archeological sites or architectural resources are known to exist at, or within its vicinity. The FONSI is located in Appendix L.

- If yes, describe or refer to documentation which determines the likelihood of an impact on this historic site and the steps taken to address that impact. : N/A

1.11 Maps

These maps include:

- Direction(s) of stormwater flow and approximate slopes before and after major grading activities
- Areas and timing of soil disturbance and areas that will not be disturbed
- Natural features to be preserved
- Locations of major structural and non-structural BMPs identified in the CBMPP
- Locations and timing of stabilization measures (see sequence of construction above)
- Locations of off-site material, waste, borrow, or equipment storage areas
- Locations of all waters of the U.S., including wetlands
- Locations where stormwater discharges to a surface water
- Locations of storm drain inlets
- Areas where final stabilization has been accomplished

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

1. *Minimize Disturbed Area and Protect Natural Features and Soil:*

Topsoil:

An adequate amount of topsoil is not present at the site and will therefore be required to be supplied from an off-site source. Existing grade will be "cut" in the areas of the proposed construction and some existing topsoil will be stockpiled on site for re-use. When soil is stockpiled, the slope of the stockpile will not exceed 2 horizontal to 1 vertical. The "pervious" areas will be stabilized as specified in Section 7.

Soil to be used as topsoil must meet the following:

- a. Topsoil shall have a pH range from 6.0-7.0. If pH is less than 6.0, lime should be added in accordance with soil test results or in accordance with the recommendations of the vegetative establishment practice being used.
- b. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
- c. If additional off-site topsoil is needed, it should meet the standards stated above.
- d. The depth of material meeting the above qualifications should be at least 4". Soil factors such as rock fragments, slope, depth to water table, and layer thickness affect the ease of excavation and spreading of topsoil.
- e. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.

The subsoil should be disked or scarified to a depth of 2" to enhance bonding of the subsoil and topsoil, immediately before placement of topsoil. Topsoil should be uniformly spread to a minimum compacted depth of 4". Required volumes of topsoil may be determined using Table 1:

Table 1: Volume of Soil Needed for Topsoiling

Depth to Spread (inches)	Cubic Yards Per 1,000 Sq. Ft.	Cubic Yards Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

Installation Schedule: As noted, some excavated soil will be stockpiled on site for re-use. Silt fence will be placed around any stockpiles to protect the existing drainage ditches and off site areas.

Maintenance and Inspection: The cut and fill areas will be inspected weekly for erosion. These areas will be stabilized immediately with erosion controls or graded to avoid possible disturbance to the existing drainage ditches or off site areas. Maintenance and inspection procedures for silt fence are described in Section 2, part 2.7.

As noted in the "sequence of construction", the proposed improvements will be phased to prevent exposing more than 5 acres of bare earth at any time. All areas of the work site will be stabilized and/or off site discharge prevented if land disturbance activities are not planned for more than 14 days.

Construction Sequence with erosion BMP's are described in Section 1.3

Responsible Staff: To Be Determined

2. Phase Construction Activity

Construction of the new Commissary has been divided into four phases, which are detailed in the Phasing Plan of the constructions documents – sheets C2.2 through C2.5. The Erosion Control Plan, located in Appendix B, has incorporated this phasing plan into the design and layout of construction BMPs as indicated on sheets C1.1 through C1.4.

3. Control Stormwater Flowing Onto and Through the Project:

Area for Silt to accumulate:

BMP Description: Before any grading operations begin, silt fence will be installed adjacent to the areas under construction just outside the limits of disturbance. Once the building has been constructed, runoff from the roof will be collected in two storm sewers and daylight to swales which will convey the runoff to the proposed storm sewer system on the north end of the site. The swales are a means of temporarily routing the roof runoff to the enclosed storm system prior to the final grading of the infiltration basins. Riprap Check Dams should be placed in these swales to slow the flow rate in the swale and to create small, temporary ponding areas.

Riprap Check Dam

1. Riprap check dams should be constructed in temporary and permanent swales, ditches, or areas of concentrated flow to minimize erosion rates and reduce velocities of stormwater flow.
2. Check dams should be placed and constructed as shown on the Erosion Control Plan.
3. Riprap should contain stone sizes from 2 to 15 inches in diameter.
4. Rock can be placed by hand or by mechanical methods (no dumping of rock) to achieve complete channel or swale coverage.
5. Check dams can be keyed into the swale or channel bottom at, typically, a depth of 6 inches, to ensure stability of the check dam.

Maintenance

1. Repair check dams as needed to maintain structural integrity. Additional stone may have to be added to maintain the correct height.

2. During inspection, remove large debris, trash, and leaves. When the sediment has reached a height of approximately one-half the original height of the dam (measured at the center), remove accumulated sediment from the upstream side of the dam.
3. When check dams are removed, care must be taken to remove all dam materials to ensure proper flow within the channel. If erosion or heavy flows cause the edges of a dam to fall to a height equal to or below the height of the center, repair it immediately.
4. Before removing a check dam, remove all accumulated sediment. Remove a check dam only after the contributing drainage area has been completely stabilized. Use permanent vegetation to stabilize the area from which the dam material is removed.

Inspection

1. Inspect check dams after each storm event to ensure their structural integrity. The center of the dam should always be lower than its edges.

4. Stabilize Soils:

Temporary Stabilization:

BMP Description: Temporary Seeding will be used on any area where construction activity is suspended for more than twenty-one days for a period of time up to twelve months to stabilize erodible materials. The area to be seeded must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification on the soil surface will be necessary prior to seeding. Fertilizer or lime are not typically used for temporary seedings. A plant selection table for temporary seeding is provided in Table 2.

Table 2: Commonly Used Plants for Temporary Cover

Species	Seeding Rate/AC PLS	Seeding Dates (Central AL)
Millet, Browntop or German	40 lbs	April 1 – August 15
Rye	3 bu	September 15 – November 15
Ryegrass	30 lbs	September 1 – October 15
Sorghum-Sudan Hybrids	40 lbs	April 15 – August 1
Sudangrass	40 lbs	April 15 – August 1
Wheat	3 bu	September 15 – November 15
Common Bermudagrass	10 lbs	March 15 – July 15
Crimson Clover	10 lbs	September 1 – November 1

Evenly apply seed using a cyclone seeder (broadcast), drill seeder, cultipacker seeder, or hydroseeder. Broadcast seeding and hydroseeding are appropriate for steep slopes where equipment cannot operate safely. Small grains should be planted no more than 1” deep, and grasses and legumes no more than ½” deep. Seed that are broadcast must be covered by raking or chain dragging, and then lightly firmed with a roller or cultipacker.

Mulching shall be used on any areas where construction activity is suspended for more than 14 days. Select a mulch based on the site and practice requirements, availability of material, and availability of labor and equipment. Table 3 lists commonly used mulches.

Table 3: Mulching Materials and Application Rates

Material	Rate Per Acre and (Per 1000 ft. ²)	Notes
Straw with Seed	1 ½ - 2 tons (70 lbs - 90 lbs)	Spread by hand or machine to attain 75% groundcover; anchor when subject to blowing.
Straw Alone (no seed)	2 ½ - 3 tons (115 lbs - 160 lbs)	Spread by hand or machine; anchor when subject to blowing.
Wood Chips	5 - 6 tons (225 lbs - 270 lbs)	Treat with 12 lbs. nitrogen/ton.
Bark	35 cubic yards (0.8 cubic yards)	Can apply with mulch blower.
Pine Straw	1 - 2 tons (45 lbs - 90 lbs)	Spread by hand or machine; will not blow like straw.
Peanut Hulls	10 - 20 tons (450 lbs - 900 lbs)	Will wash off slopes. Treat with 12 lbs. nitrogen/ton.

Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding.

Installation Schedule: Portions of the site where construction activities will temporarily cease for more than 14 days will be stabilized with mulch. Where construction activities will temporarily cease for more than 21 days will be temporary seeded.

Maintenance and Inspection: Mulched areas will be inspected weekly and after rainstorms to check for rill erosion, dislocation, or failure. Repairs will be conducted as needed.

Responsible Staff: To Be Determined

Permanent Stabilization:

Permanent stabilization will be completed within 14 days after the site is brought to its final grades in accordance with the procedures detailed in Section 7. Permanent stabilization will also be established on any disturbed area to remain for a period of 12 months or longer.

Maintenance and Inspection: All areas will be inspected weekly during construction for failure until a dense vegetation cover has been established.

Responsible staff: To Be Determined

Dust Control:

Dust from the site will be controlled by using a mobile pressure-type distributor truck that will apply potable water at rate of 300 gallons per acre and minimized as needed to avoid ponding.

Installation Schedule: Dust control will be implemented as needed once site grading has been initiated, and during windy conditions exceeding 20mph, while site grading is occurring. Spraying of potable water will be performed no more than three times per day during the months of March through May and once per day from June to September or whenever dryness of soil warrants it.

Maintenance Schedule: At least one mobile unit will be available at all times during construction to apply potable water. Each mobile unit shall be equipped with a positive shutoff valve to prevent over watering of disturbed areas.

Responsible Staff: To Be Determined

5. *Protect Storm Drain Inlets:*

Drop Inlet Protection:

BMP Description: The proposed on-site storm drain inlets will be protected with Filter Fabric Inlet Protection, Stone and Block Drop Inlet Protection, Curb Drop Inlet Protection, or Excavated Drop Inlet Protection as detailed in the Erosion Control Plan as soon as these facilities are installed. Stabilized base course shall be installed in the parking areas within four weeks after the inlets are installed to limit conveyance of silt to the inlets. Any existing storm drain inlets are to be protected similarly if receiving runoff from unstabilized areas.

Responsible staff: To Be Determined

Construction Specifications

Drop Inlet Protection

1. Filter Fabric Drop Inlet Protection
 - a. See Detail 4 on Sheet C1.5 in the Erosion Control Plan (Appendix B) for details on Filter Fabric Drop Inlet Protection.
 - b. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.
 - c. The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to unprotected lower areas.
 - d. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved

- performance and sediment storage volume can be obtained by excavating the area.
- e. If straw bales are used in lieu of filter fabric, they should be placed tight with the cut edge adhering to the ground at least 3 inches below the elevation of the drop inlet. Two anchor stakes per bale shall be driven flush to bale surface. Straw bales will be replaced every 4 months until the area is stabilized.
2. **Block and Gravel Drop Inlet Sediment Filter**
 - a. The foundation for the blocks should be excavated at least 2” below the crest of the storm drain. The bottom row of blocks should be placed against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, lateral support may be given to subsequent rows by placing 2” x 4” wood studs through block openings.
 - b. Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, with the ends of adjacent blocks abutting. The height of the barrier can be varied, depending on design needs, by stacking combinations of 4-inch, 8-inch and 12-inch wide blocks. The barrier of blocks shall be at least 12-inches high and no greater than 24-inches high.
 - c. The top elevation of the structure must be at least 6” lower than the ground elevation downslope from the inlet. It is important that all storm flows pass over the structure and into the storm drain and not past the structure. Temporary dikes below the structure may be necessary to prevent bypass flow. Material may be excavated from inside the sediment pool for this purpose.
 - d. Wire mesh shall be placed over the outside vertical face (webbing) of the concrete blocks to prevent stone from being washed through the holes in the blocks. Wire mesh with ½-inch openings shall be used.
 - e. Stone shall be placed against the wire to the top of the block barrier, as shown on Sheet C1.5. Alabama Highway Department No. 57 Coarse Aggregate or similar gradations should be used.
 - f. Place a minimum of 1 block on the bottom row (more as needed) on its side to allow for dewatering the pool.
 - g. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the blocks, cleaned and replaced.
 3. **Filter Fabric Insert**
 - a. Follow specifications described by the product manufacturer for effective installation. A detail for the Dandy Bag® II is included in Detail 4 on Sheet C1.5 as an example of an acceptable filter.

Maintenance

1. Sediment should not be allowed to wash into the storm drain inlet. It should be removed from the inlet protection and disposed of and stabilized so that it will not enter the inlet again.
2. When contributing drainage area has been permanently stabilized, all materials and any sediment should be removed, and either salvaged or disposed of properly.
3. Any disturbed area adjacent to the inlet as a result of installation or removal of the inlet protection shall be brought to proper grade, smoothed, compacted, and stabilized in a manner appropriate to the site.
4. Expected life of a silt fence barrier is 3 months. Maintenance needs and repairs should be accomplished immediately should the inlet protection fail.

Inspection

1. Inspections of storm drain inlet protection methods should be made before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least twice every seven calendar days, at least 72 hours apart.
2. Where sites have been finally or temporarily stabilized, such inspections may be conducted only once per month.

6. *Establish perimeter controls and sediment barriers:*

Sediment Barrier:

BMP Description/Installation: As noted above, before any grading operations begin, silt fence will be installed adjacent to the areas under construction, just outside the limits of disturbance, and any other locations as indicated on the Erosion Control Plans. Silt fence may also be used for storm drain inlet protection as detailed in Section 2.3 of this report.

Responsible Staff: To Be Determined

Construction Specifications

Sediment Barrier

1. See Detail 1 on Sheet C1.5 in the Erosion Control Plan (Appendix B) for details on Sediment Barrier - Silt Fence.
2. The material for silt fence fabric shall meet the specifications shown in Table 3 below unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.
3. The stakes used to anchor the filter fabric should be wood or metal. Wooden stakes should be at least 5 feet long and have a minimum diameter of 2 inches if a hardwood like oak is used. Stakes from soft woods like pine should be at least 3 inches in diameter. When using metal posts in place of wooden stakes, they should weigh at least 1.33 lb/linear foot. If metal posts are used, attachment points are needed for fastening the filter fabric with wire ties.

4. Erect silt fence in a continuous fashion from a single roll of fabric to eliminate gaps in the fence. If a continuous roll of fabric is not available, overlap the fabric from both directions only at stakes or posts. Overlap at least 6 inches. Excavate a trench to bury the bottom of the fabric fence at least 6 inches below the ground surface. This helps to prevent gaps from forming near the ground surface. Gaps would make the fencing useless as a sediment barrier.
5. The height of the fence posts should be at least 30 inches above the original ground surface. Space the posts no more than 6 feet apart.
6. The fence should be designed to withstand the runoff from a 10-year peak storm event. Once installed, it should remain in place until all areas upslope have been permanently stabilized by vegetation or other means.

Table 3: Specifications for Silt Fence Fabric

Physical Property	Minimum Requirements
Tensile Strength (Lbs. Min. ¹ ASTM D-4632)	Warp - 120 Fill - 100
Elongation (% Max.) (ASTM D-4632)	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	No. 30
Flow Rate (Gal./Min./Sq. Ft.)	25
Ultraviolet Stability ² (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphragm Bursting Strength Tester)	175
Minimum Fabric Width (Inches)	36

¹Minimum roll average of 5 specimens.

²Percent of required initial minimum tensile strength.

Maintenance

1. Sediment should be removed when “bulges” develop in the silt fence, or once silt reaches 25% of the original height of the barrier.
2. Filter fabric should be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months).
3. Silt fence should remain in place until disturbed areas have been permanently stabilized.
4. All sediment accumulated at the fence should be removed and properly disposed of before the fence is removed.

Inspection

1. Inspect silt fence before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least twice every seven calendar days, at least 72 hours apart.
2. Where sites have been finally or temporarily stabilized, such inspections may be conducted only once per month.

7. *Retain Sediment On-Site and Control Dewatering Practices:*

Sump Pit:

BMP Description/Installation: The new Commissary site is relatively flat, thus providing positive drainage during excavation, particularly for building foundations, may not always be practicable. A sump pit shall be used in the event that excessive water collects during the excavation phase of construction.

The number of sump pits and their locations shall be determined by the Contractor. A design is not required, but construction should conform to the general criteria outlined in Detail 6 of Sheet C1.5 in the Erosion Control Plans (Appendix B).

Responsible Staff: To Be Determined

Construction Specifications

Sump Pit

1. A perforated vertical standpipe is placed in the center of the pit to collect filtered water. Water is then pumped from the center of the pipe to a suitable discharge area.
2. Discharge of water pumped from the standpipe should be to a sediment trap, sediment basin, or stabilized area, such as a filter strip. If water from the sump pit will be pumped directly to a storm drain system, filter cloth (Mirafi 100X, Poly Filter GB, or a filter cloth with an equivalent sieve size between 40-80) should be wrapped around the standpipe to ensure clean water discharge.
3. It is recommended that ¼ to ½ inch hardware cloth be wrapped around and secured to the standpipe prior to attaching the filter cloth. This will increase the rate of water seepage into the standpipe.

8. *Establish Stabilized Construction Exits:*

Construction Exit Pad:

BMP Description/Installation: A construction exit pad (CEP) shall be installed at the entrance and exit to the job site before construction begins (the staging and on site

construction parking area is in an existing asphalt area). Stabilized exits are used to prevent the off-site transport of sediment by construction vehicles. At the entrance and exit to the site, the CEP shall be at least 12 feet wide or 24 feet if there is only one access to the site. The crushed stone for the CEP at the entrance or exit shall be placed over a layer of geotextile. For additional details see the Erosion Control Plan (Appendix B).

Responsible Staff: To Be Determined

Construction Specifications

Construction Exit Pad

1. See Detail 2 on Sheet C1.5 in the Erosion Control Plan (Appendix B) for details on the Stabilized Construction Entrance.
2. Locate CEP at every point where construction traffic enters or leaves a construction site. Vehicles leaving this site must travel over the entire length of the CEP. The orientation of the CEP may vary from a straight line and be curved or 'T' shaped depending on the topography and right of way. Avoid locating entrances along the low point of work area where possible.
3. The aggregate shall be Alabama Highway Department coarse aggregate gradation No. 1.
4. The aggregate layer shall not be less than six inches thick.
5. The width shall be a minimum of 12-feet but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.
6. The length shall be as required, but not less than 50 feet.
7. A geotextile shall be placed over the entire area to be covered with aggregate if the CEP is placed over a soft subgrade (blow count less than 10). Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.
8. The geotextile shall be nonwoven fabric meeting the Class IV Nonwoven Geotextile requirements listed in NRCS Material Specification 592.
9. A washing facility shall be provided if necessary to prevent mud and caked soil from being transported to public streets and highways. It shall be constructed of concrete, stone, and/or other durable materials. Provisions shall be provided for the mud and other material to be carried away from the washing facility to a sediment trap or basin to allow for settlement of the sediment from the runoff before it is released from the site.

Maintenance

1. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate.
2. All sediment spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains shall be removed immediately.
3. When necessary, vehicle wheels should be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it should be done

- on an area stabilized with aggregate that drains into an approved sediment trap or protected inlet.
3. Trapped sediment should be removed from the site or stabilized on site and prevented from entering storm drains, ditches, or waterways. Disturbed soil areas resulting from removal should be permanently stabilized.
 4. The stabilized construction entrance may be removed after final site stabilization is achieved or after the temporary BMPs are no longer needed.

Inspection

1. Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
2. While activities associated with the BMPs are under way, and at least twice every seven calendar days, at least 72 hours apart.
3. Inspect local roads adjacent to the site daily. Sweep or vacuum to remove visible accumulated sediment.

9. Additional BMPs:

Culvert Inlet/Outlet Protection:

BMP Description/Installation: Coarse aggregate and riprap shall be installed at culvert openings to intercept sediment and slow stormwater discharges, at various locations as shown on the Erosion Control Plan.

Responsible Staff: To Be Determined

Construction Specifications

Culvert Inlet Protection

1. **Rock Barrier:** The stone culvert inlet protection is a small stone berm in a horseshoe shape around the culvert inlet. The upstream half of the stone berm shall consist of coarse aggregate and the downstream half of the stone berm shall consist of riprap. Riprap should consist of a well-graded mixture of rock (a range of sizes). Larger rock should predominate, with sufficient smaller sizes to fill the voids between the rock. The riprap stone sizes should range from 2 to 15 inches in diameter. Coarse aggregate should have a minimum stone size of ¾-inch diameter.
2. Maximum height of the stone berm shall be 3 feet. Side slopes of the stone berm section shall not exceed 2:1 horizontal to vertical. The stone berm shall be tied into the culvert embankment a minimum of 1 foot above the design elevation of the stone berm.

Maintenance

1. If aggregate is used, it shall be replaced or cleaned when inspection reveals that clogged voids are causing ponding problems.
2. Sediment shall be removed and the impoundment restored to its original dimensions when sediment has accumulated to one-half the height of the fence or stone berm. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems.
3. Temporary structures shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Inspection

1. Inspect the inlet protection structure before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least once every seven calendar days. Where sites have been finally or temporarily stabilized, such inspections may be conducted only once per month.

Riprap Outlet Protection

1. Ensure that the subgrade for the geotextile and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. Geotextile - Install a geotextile liner to prevent soil movement through the openings in the riprap.
3. Geotextile must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece of geotextile over the damaged area. All connecting joints should overlap a minimum of 1 foot. If the damage is extensive, replace the entire geotextile liner.
4. Riprap may be placed by equipment, but take care to avoid damaging the geotextile.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter, but not less than 6”.
6. The outlet structure must conform to the specified grading limits shown on the plans.
7. Construct the apron on zero grade with no turbulence at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
8. Ensure that the apron is properly aligned with the receiving stream and, preferably, straight throughout its length.
9. Immediately after construction, stabilize all disturbed areas with vegetation.
10. Stone quality - Select stone for riprap from fieldstone or quarry stone. The stone should be hard, angular, and highly weather-resistant. The specific gravity of the individual stones should be at least 2.5.

Maintenance

1. If any erosion around or below the riprap has taken place or if stones have been dislodged, immediately make all needed repairs to prevent further damage.

Inspection

1. Inspect riprap outlets after heavy storms and high flows for scouring under the outlet and dislodged stones.

SECTION 3: GOOD HOUSEKEEPING BMPS

3.1 Good Housekeeping BMPs (from EPA Website)

1. Material Handling and Waste Management:

Waste Materials:

All waste materials will be collected and disposed of into three metal waste dumpsters in the materials storage area. Dumpsters will have a secure tight lid, be placed away from storm water drains and structures, and will meet all federal, state, county, and local regulations. Only trash and construction debris will be placed in the dumpsters. Construction materials will not be buried on site. All personal will be instructed, during tailgate training sessions, regarding the correct disposal of trash and construction debris. Notices that state these practices will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these practices are followed.

Installation Schedule: Trash dumpsters will be installed when the materials storage area has been established.

Maintenance and Inspection: The dumpsters will be inspected weekly and immediately after storm events. The dumpster will be emptied weekly, or more frequently if needed, and taken to the appropriate landfill.

Hazardous Waste Materials:

BMP Description: All hazardous waste materials including oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed shipping containers, within the hazardous materials storage area. Hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials. Secondary containment will be provided for all waste materials in the hazardous materials storage area and will consist of commercially available spill pallets. Additionally, all hazardous waste materials will be disposed of in accordance with federal, state, county, and local regulations. Hazardous waste materials will not be disposed of into the on-site dumpsters. All personnel will be instructed, during tailgate training sessions, regarding proper procedures for hazardous waste disposal. Notices that state these procedures will be posted in the office trailer and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

Installation Schedule: Shipping containers used to store hazardous waste materials will be installed once the site materials storage area has been installed.

Maintenance and Inspection: The hazardous waste materials area will be inspected weekly and after storm events. The storage area will be kept clean, well organized and equipped with ample cleanup supplies as appropriate for the materials being stored. Material safety datasheets, material inventory, and emergency contact numbers will be maintained in the office trailer.

Responsible staff: To Be Determined

Sanitary Waste:

BMP Description: Two portable toilets, located in the staging area, will be provided at the site throughout the construction phase. The toilets will be anchored as approved by the stormwater inspector and located away from concentrated drainage flow paths and will have collection pans underneath as secondary containment.

Installation schedule: The portable toilets will be set up at the site when the staging area is complete.

Maintenance and Inspection: Sanitary waste will be collected a minimum of three times a week and shall be inspected weekly for evidence of leaking holding tanks.

Responsible staff: To Be Determined

Recycling:

BMP Description: Wood pallets, cardboard boxes, and other recyclable construction scraps will be disposed of in a designated dumpster for recycling. The dumpster will have a secure watertight lid, be placed away from stormwater conveyances and drains and meet all local and state solid-waste management regulations. Only solid recyclable construction scraps from the site will be deposited in the dumpster. All personnel will be instructed, during tailgate training sessions, regarding the correct procedure for disposal of recyclable construction scraps. Notices that state these procedures will be posted in the office trailer, and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

Installation Schedule: Designated recycling dumpsters will be installed once the combined staging area has been established.

Maintenance and Inspection: The recycling dumpster will be inspected weekly. The recycling dumpster will be emptied weekly and taken to an approved recycling center by the contractor. If recyclable construction wastes are exceeding the dumpster's capacity, the dumpsters will be emptied more frequently.

Responsible Staff: To Be Determined

2. *Establish Proper Building Material Staging Areas:*

Materials Storage Area:

BMP Description: Construction equipment and maintenance materials will be stored at the combined staging area and materials storage areas. This area will be located in an existing paved area on the southeast section of the property. Hale Bales shall be installed around the perimeter of the area. A watertight shipping container will be used to store hand tools, small parts, and other construction materials. Non-hazardous building materials such as packaging material (wood, plastic, and glass), and construction scrap material (brick, wood, steel, metal scraps, and pipe cuttings) will be stored in a separate covered storage facility adjacent to the shipping container. All hazardous-waste materials such as oil filters, petroleum products, paint, and equipment maintenance fluids will be stored in structurally sound and sealed containers under cover within the hazardous materials. Very large items, such as framing materials and stockpiled lumber, will be stored in the open in the materials storage area. Such materials will be elevated on wood blocks to minimize contact with runoff.

Installation Schedule: The materials storage area will be installed immediately and before any grading occurs or before any infrastructure is constructed at the site.

Maintenance and Inspection: The storage area will be inspected weekly. The storage area will be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function.

Responsible Staff: To Be Determined

3. *Designate Washout Areas:*

Concrete Washout

BMP Description: A designated temporary, above-grade concrete washout area will be constructed as detailed on the site map. The temporary concrete washout area will be constructed as shown on the Erosion Control Plan, with a recommended minimum length and minimum width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The washout area will be lined with plastic sheeting at least 10 mils thick and free of holes or tears. Signs will be posted marking the location of the washout area to ensure that concrete equipment operators use the proper facility.

Concrete pours will not be conducted during or before an anticipated storm event. Concrete mixer trucks and chutes will be washed in the designated area or concrete wastes will be properly disposed of off-site. When the temporary washout area is no longer needed for the construction project, the hardened concrete and materials used to construct the area will be removed and disposed of according to the maintenance section below, and the area will be stabilized. For design specifications, see appendix.

Installation Schedule: The washout area will be constructed before concrete pours occur at the site.

Maintenance and Inspection: The washout areas will be inspected weekly and each day of use to ensure that all concrete washing is being discharged into the washout area, no leaks or tears are present, and to identify when concrete wastes need to be removed. The washout areas will be cleaned out once the area is filled to 75 percent of the holding capacity. Once the area's holding capacity has been reached, the concrete wastes will be allowed to harden; the concrete will be broken up, removed, and taken to the appropriate landfill for disposal. The plastic sheeting will be replaced if tears occur during removal of concrete wastes from the washout area.

Responsible Staff: To Be Determined

4. *Establish proper equipment/vehicle fueling and maintenance practices:*

Vehicle/Equipment Fueling and Maintenance:

BMP Description: Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipments, rollers, trucks and trailers, backhoes, and forklifts. All major equipment/vehicle fueling and maintenance will be performed off-site. A small, 20 gallon pickup bed fuel tank will be kept on-site in the combined staging area. When vehicle fueling must occur on-site, the fueling activity will occur in the staging area. Only minor equipment maintenance will occur on-site. All equipment fluids generated from maintenance activities will be disposed of into designated drums stored on spill pallets in accordance with Part 3.1. Absorbent, spill-cleanup materials and spill kits will be available at the combined staging and materials storage area. Drip pans will be placed under all equipment receiving maintenance and vehicles and equipment parked overnight.

Installation Schedule: BMPs implemented for equipment and vehicle maintenance and fueling activities will begin at the start of the project.

Maintenance and Inspection: Inspect equipment/vehicle storage areas and fuel tank weekly. Vehicles and equipment will be inspected on each day of use. Leaks will be repaired immediately, or the problem vehicle(s) or equipment will be removed from the project site. Keep ample supply of spill-cleanup materials on-site and immediately clean up spills and dispose of materials properly.

Responsible Staff: To Be Determined

5. *Allowable non-stormwater discharges and control equipment/vehicle washing:*

BMP Description: All equipment and vehicle washing will be performed off-site. (See section 3.2 below for additional information related to non-storm water discharges)

6. *Spill Prevention and Control Plan:*

Spill Prevention and Control Procedures:

BMP Description:

1. Employee Training: All employees will be trained via biweekly tailgate sessions, as detailed in Section 6, Part 6.3.
2. Vehicle Maintenance: Vehicles and equipment will be maintained off-site. All vehicles and equipment including subcontractor vehicles will be checked for leaking oil and fluids. Vehicles leaking fluid will not be allowed on-site. Drip pans will be placed under all vehicles and equipment that are parked overnight.
3. Hazardous Material Storage: Hazardous materials will be stored in accordance with Section 3, Part 1 and federal and municipal regulations.
4. Spill Kits: Spill kits will be stored within the material storage area and concrete washout areas.
5. Spills: All spills will be cleaned up immediately upon discovery. Spent absorbent materials and rags will be hauled off-site immediately after the spill is cleaned up for disposal at the appropriate landfill. Spills large enough to discharge to surface water will be reported to the National Response Center at 1-800-424-8802.
6. Material safety data sheets, a material inventory, and emergency contact information will be maintained at the on-site project trailer.

Installation Schedule: The spill prevention and control procedures will be implemented once construction begins on-site.

Maintenance and Inspection: All personnel will be instructed, during tailgate training sessions, regarding the correct procedures for spill prevention and control. Notices that state these practices will be posted in the office trailer, and the individual who manages day-to-day site operations will be responsible for seeing that these procedures are followed.

Responsible Staff: To Be Determined

7. *Any Additional BMPs:*

N/A

3.2 *Allowable Non-Stormwater Discharge Management*

Items include: discharges from fire fighting activities, fire hydrant flushing, landscape watering, water used to control dust, wash downs with potable water that does not include detergents. Dewatering of foundation and utility trenches is not anticipated. All erosion control practices shall be followed by the contractor in connection with these activities.

Irrigation waters will be sprayed onto landscape areas only. The sprinklers will have low flow rates and increased watering time. The irrigation area will be inspected regularly for excess watering and if needed, adjustments will be made.

Any changes in construction activities that produce other allowable non-storm water discharges will be identified, and the CBMPP will be amended and the appropriate erosion and sediment control will be implemented.

Responsible staff: To Be Determined

SECTION 4: SELECTING POST-CONSTRUCTION BMPs

1. *Infiltration*

Two Infiltration Basins will be installed on site to provide water quality, storage volume, and groundwater recharge for stormwater runoff from the roof and main parking area of the new Commissary. Additional information on infiltration basins not presented in this section can be found in the EPA National Pollutant Discharge Elimination System (NPDES) Stormwater Menu of Post-Construction BMPs.

The areas designated for future infiltration basins must not be utilized for sediment trapping devices during construction, as clogging of the natural soils may occur and reduce the permeability of the basin bottom. Thus, sediment-laden stormwater will be diverted from these areas as indicated in the Erosion Control Plan.

The infiltration basin drain time should be observed after completion or modification of the facility to confirm that the desired drain time has been obtained. Newly established vegetation should be inspected several times to determine if any landscape maintenance is necessary. Any factors responsible for clogging should be repaired immediately. Also, the basin bottom should be weeded once monthly during the first two growing seasons.

Other standard maintenance requirements for an infiltration basin require:

- stabilizing eroded banks, repairing undercut and eroded areas at inflow and outflow structures,
- maintaining access to the basin for regular maintenance activities,
- mowing as appropriate for vegetative cover species,
- monitoring health of vegetation and replacing as necessary,
- controlling mosquitoes as necessary, and
- removing litter and debris from infiltration basin area as required.

Semi-annual maintenance of an infiltration basin requires:

- mowing and removing grass clippings, litter, and debris,
- trimming vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons, and
- replanting eroded or barren spots to prevent erosion and accumulation of sediment.

Three to five year maintenance of an infiltration basin requires:

- scraping the bottom and removing sediment when accumulated sediment reduces original infiltration rate by 25-50% (restoring original cross-section and infiltration rate),
- seeding or sodding (side slopes only) to restore ground cover,
- disking or otherwise aerating the bottom of the basin, and
- dethatching the basin bottom.

SECTION 5: INSPECTIONS and MAINTENANCE

5.1 Inspections

1. Inspection Personnel:

- To Be Determined

2. Inspection Schedule and Procedures:

- See Sections 2 and 3.
- See Appendix E for a sample Inspection Report

5.2 Maintenance of Controls

Maintenance Procedures: See Sections 2 and 3.

5.3 Corrective Action Log

Corrective Action Log: See Appendix F for a sample Corrective Action Log

SECTION 6: Recordkeeping and Training

6.1 Recordkeeping

The following is a list of records that should be kept at the project site available for inspectors to review:

- Dates of grading, construction activity (and stabilization – see Section 7).
- Copy of the construction general permit (see Appendix C).
- The signed and certified NOR form or permit application form (see Appendix D).
- Inspection reports (see Appendix E).
- Records relating to endangered species and historic preservation (see Appendix M).

Dates when major grading activities occur:

- See construction sequence in Section 1 of this report.

Dates when construction activities temporarily or permanently cease on a portion of the site

- See construction sequence in Section 1 of this report.

See Appendix I for a sample Grading and Stabilization Activities Log

6.2 Log of Changes to the CBMPP

Log of changes and updates to the CBMPP

- See Appendix G for a CBMPP Amendment Log

6.3 Training

- General stormwater and BMP awareness training for staff and subcontractors is described in Section 2 and 3 of this report. Further supporting information can be found in the 2010 Maryland Standards and Specifications for Soil Erosion and Sediment Control, as well as the Maryland Stormwater Design Manual.
- Detailed training for staff and subcontractors with specific stormwater responsibilities is also contained in Section 2 and 3 of this report. Additional information can be found in the National Menu of Stormwater Best Management Practices by the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System:
< <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm> >

Individual(s) Responsible for Training:

- To Be Determined

SECTION 7: FINAL STABILIZATION

Permanent seeding should be applied immediately after the final design grades are achieved at the site but no later than 14 days after construction activities have permanently ceased. After the entire site is stabilized, any sediment that has accumulated will be removed and hauled off site to a licensed landfill facility. Construction debris, trash, and temporary BMP's will also be removed and any areas disturbed during removal will be seeded immediately.

Seedbed Preparation:

1. Topsoil will be spread over final graded areas at a minimum depth of four inches.
2. The seedbed will be free of rocks, woody debris and other objectionable material that will interfere with future mowing or maintenance.
3. Incorporate lime and fertilizer to a depth of at least 6" with a disk or rotary tiller on slopes of up to 3:1. On steeper slopes, lime and fertilizer may be applied to the surface without incorporation. Lime and fertilizer may be applied through hydroseeding equipment; however, fertilizer should not be added to the seed mixture during hydroseeding. Lime may be added with the seed mixture.
4. Follow the design plan or soil test recommendation. If a plan or soil test is not available, use 2 tons/acre of ground agricultural lime on clayey soils (approximately 90 lbs/acre) and 1 ton/acre on sandy soils (approximately 45 lbs/acre). Exception to situation without a design or a soil test: If the cover is tall fescue and clover, use 2 tons of agricultural lime (approximately 135 lbs/1000 ft²) on both clayey and sandy soils. Spread the specified amount of lime and incorporate into the top 6" of soil after applying fertilizer.
5. Apply a complete fertilizer at rates specified in the design plan or as recommended by soil tests. In the absence of soil tests, use the following as a guide: (Fertilizer can be blended to meet exact fertilizer recommendations)

Grass Alone

Use 8-24-24 or equivalent – apply 400 lbs/acre (approximately 9 lbs/1000 ft²) starting. When vegetation has emerged to a stand and is growing, 30 to 40 lbs/acre (approximately 0.8 lbs/10000 ft²) of additional nitrogen fertilizer should be applied.

Grass-Legume Mixture

Use 8-24-24 or equivalent – apply 400 lbs/acre (approximately 9 lbs/1000 ft²). When vegetation has emerged to a stand and is growing, 30 to 40 lbs/acre (approximately 0.8 lbs/10000 ft²) of additional nitrogen fertilizer should be applied.

Legume Alone

0-20-20 or equivalent – apply 500 lbs/acre (approximately 11.5 lbs/1000 ft²) at planting.

6. Plant the species in the plan Landscaping Plan and Details in Appendix B at the rate and depth specified. Apply seed uniformly using a cyclone seeder, drop-type spreader, drill, cultipacker seeder, or hydroseeder. When using a drill seeder, plant grasses and legumes ¼” to ½” deep. Calibrate equipment in the field.
7. When planting by methods other than a drill seeder, cover seed by raking, or dragging a chain, brush or mat. Then firm the soil lightly with a roller. Seed can also be covered with hydro-mulched wood fiber and tackifier. Legumes require inoculation with nitrogen-fixing bacteria to ensure good growth. Purchase inoculum specific for the seed and mix with seed prior to planting.
8. Cover 65% to 75% of the surface with the specified mulch materials. Mulching is extremely important for successful seeding in many situations and whether the mulching material is straw or a manufactured product, the material needs to be applied properly.

See the Landscaping Plan and Details in Appendix B for designed seed mix. Reference pages 53 through 59 – Permanent Seeding (PS) – located in Chapter 3 of Volume 2 of the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas for additional specifications relating to seeding, fertilizer, mulching, and sodding.

Final stabilization should be installed on portions of the site where construction activities have permanently ceased will be stabilized, as soon as possible but no later than 14 days after construction ceases.

All seeded areas will be inspected weekly during construction activities for failure until a dense cover of vegetation has been established. If failure is noticed on the seeded area, the area will be seeded, fertilized and mulched immediately. After construction is complete at the site permanent stabilization measures will be monitored until final stabilization is reached.

Responsible Staff: To Be Determined (during construction); Gunter Annex personnel (after construction).

SECTION 8: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

CBMPP APPENDICES

Attach the following documentation to the CBMPP:

Appendix A - General Location Map

Appendix B - Site Maps (Erosion Control Plan & Details, Site Plans & Details)

Appendix C - Copy of NOR and Acknowledgement Letter from ADEM

Appendix D - Inspection Reports

Appendix E – Hydrology Worksheet and Hydrograph

Appendix F - Corrective Action Log

Appendix G - Log of Changes and Updates to CBMPP

Appendix H - Subcontractor Certifications/Agreements

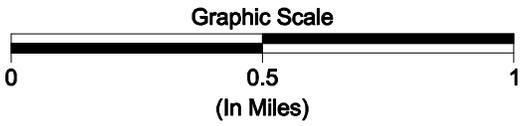
Appendix I - Grading and Stabilization Activities Log

Appendix J - CBMPP Training Log

Appendix K - Delegation of Authority Form

Appendix L - Endangered Species and Historic Preservation Documentation

APPENDIX A: GENERAL LOCATION MAP



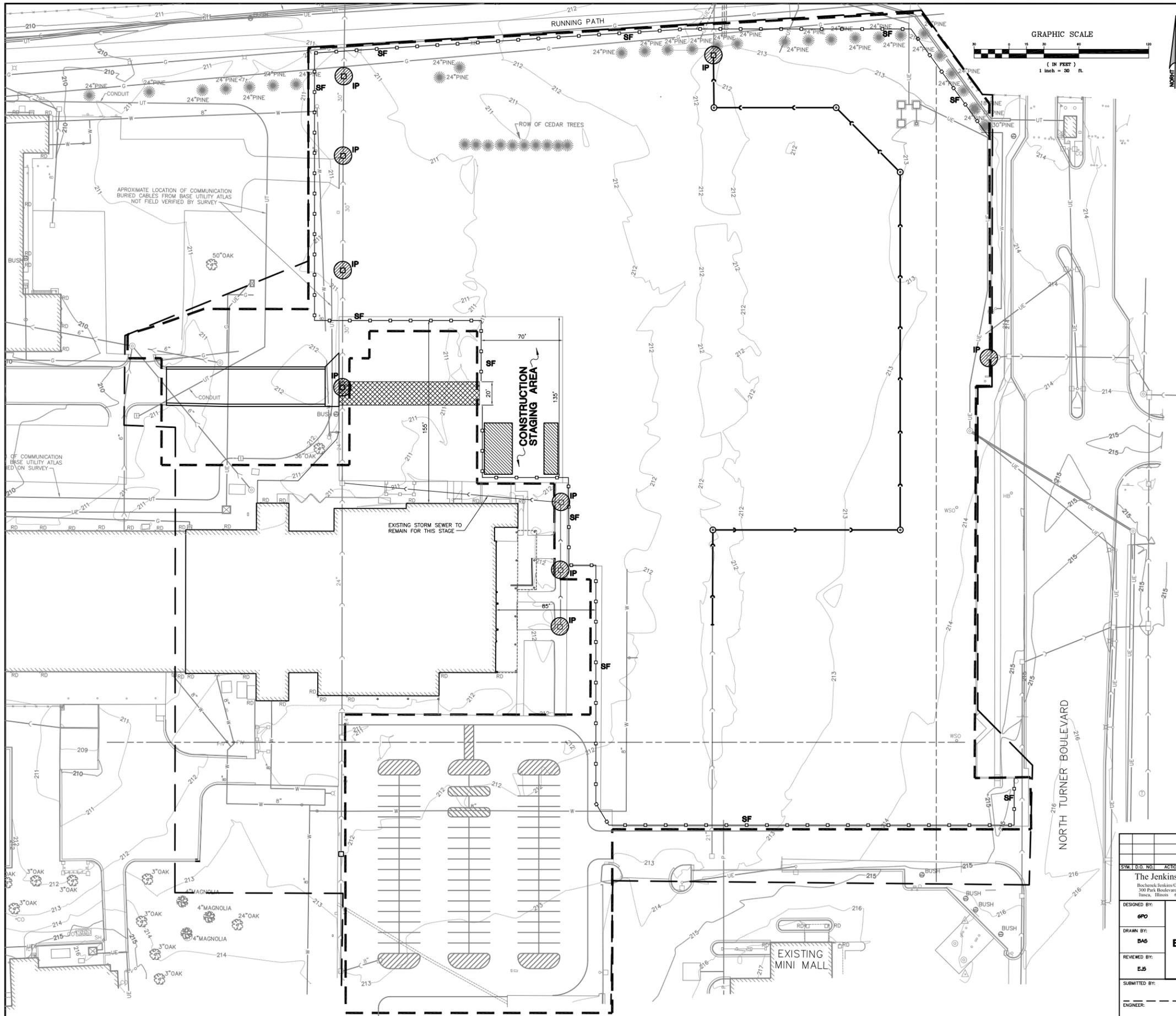
LOCATION MAP

New Commissary Facility
Maxwell A.F.B. - Gunter Annex

USGS QUADRANGLES:
MONTGOMERY NORTH, AL
DATED 2009

WILLOW SPRINGS, AL
DATED 2009

APPENDIX B: SITE MAPS



SYMBOL LEGEND

- EXISTING DRAINAGE STRUCTURE
- ⊙ EXISTING MANHOLE
- ⊕ EXISTING FIRE HYDRANT
- ⊛ EXISTING VALVE BOX
- HB ○ EXISTING HOSE BIB
- ⊠ EXISTING METER BOX
- ⊠ EXISTING LIGHT POLE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- UE EXISTING UNDERGROUND ELECTRIC
- - - UE ABANDONED UNDERGROUND ELECTRIC
- - - UT EXISTING UNDERGROUND TELEPHONE
- - - UT ABANDONED UNDERGROUND TELEPHONE
- - - EXISTING MINOR CONTOUR LINE
- - - EXISTING MAJOR CONTOUR LINE
- ⊠ EXISTING ELECTRIC BOX
- 18" OAK ○ EXISTING DECIDUOUS TREE
- 24" PINE ○ EXISTING CONIFER TREE
- STAGE I LIMITS OF CONSTRUCTION
- SF ○ EXISTING SILT FENCE, REF. DETAIL 1-C1.5
- CIP ○ CULVERT INLET PROTECTION, REF. DETAIL 7-C1.5
- IP ○ DROP INLET PROTECTION, REF. DETAIL 4-C1.5
- ⊠ CONSTRUCTION EXIT PAD, REF. DETAIL 2-C1.5
- NEW ITEM TO BE CONSTRUCTED DURING PHASE

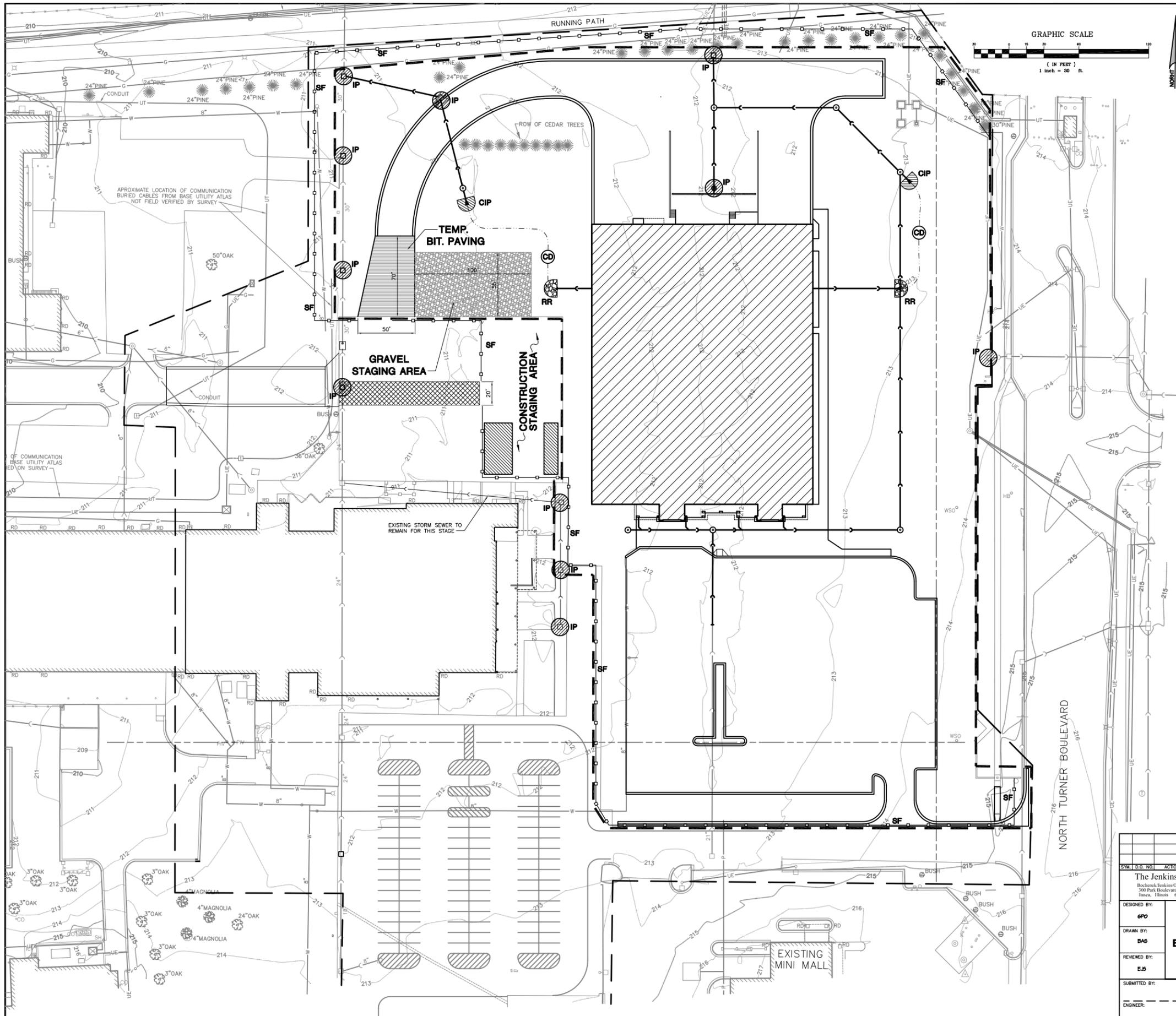
SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
Bochenek Jenkins Olsen Swobbe
390 Park Boulevard, Suite 250
Itasca, Illinois 60143-5146

DEFENSE COMMISSARY AGENCY
DIRECTORATE OF PERFORMANCE & POLICY
FORT LEE, VIRGINIA
LACKLAND AFB, TEXAS

NEW COMMISSARY FACILITY
EROSION AND SEDIMENT CONTROL PLAN-STAGE I
MAXWELL A.F.B. - GUNTER ANNEX, AL

DESIGNED BY: GPO	SOL. NO.	DATE: 01 MAR 11
DRAWN BY: BAG	PROJECT NO.	SEQUENCE NO.
REVIEWED BY: EJS	DRAWING NUMBER	SHEET NO. OF
SUBMITTED BY:		
ENGINEER:		C1.1



SYMBOL LEGEND

- EXISTING DRAINAGE STRUCTURE
- ⊙ EXISTING MANHOLE
- ⊕ EXISTING FIRE HYDRANT
- ⊛ EXISTING VALVE BOX
- HB ○ EXISTING HOSE BIB
- ⊠ EXISTING METER BOX
- ⊠ EXISTING LIGHT POLE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- - - EXISTING UNDERGROUND TELEPHONE
- - - ABANDONED UNDERGROUND TELEPHONE
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- ⊠ EXISTING ELECTRIC BOX
- ⊙ EXISTING DECIDUOUS TREE
- ⊙ EXISTING CONIFER TREE
- STAGE II LIMITS OF CONSTRUCTION
- SF ○ SILT FENCE, REF. DETAIL 1-C1.5
- ⊠ CONSTRUCTION EXIT PAD, REF. DETAIL 2-C1.5
- CIP ⊠ CULVERT INLET PROTECTION, REF. DETAIL 7-C1.5
- IP ⊠ DROP INLET PROTECTION, REF. DETAIL 4-C1.5
- RR ⊠ RIPRAP OUTLET PROTECTION, REF. DETAIL 3-C1.5
- CD ⊠ CHECK DAM - RIPRAP REF. DETAIL 6-C1.5
- NEW ITEM TO BE CONSTRUCTED DURING PHASE
- NEW ITEM CONSTRUCTED DURING PREVIOUS PHASE

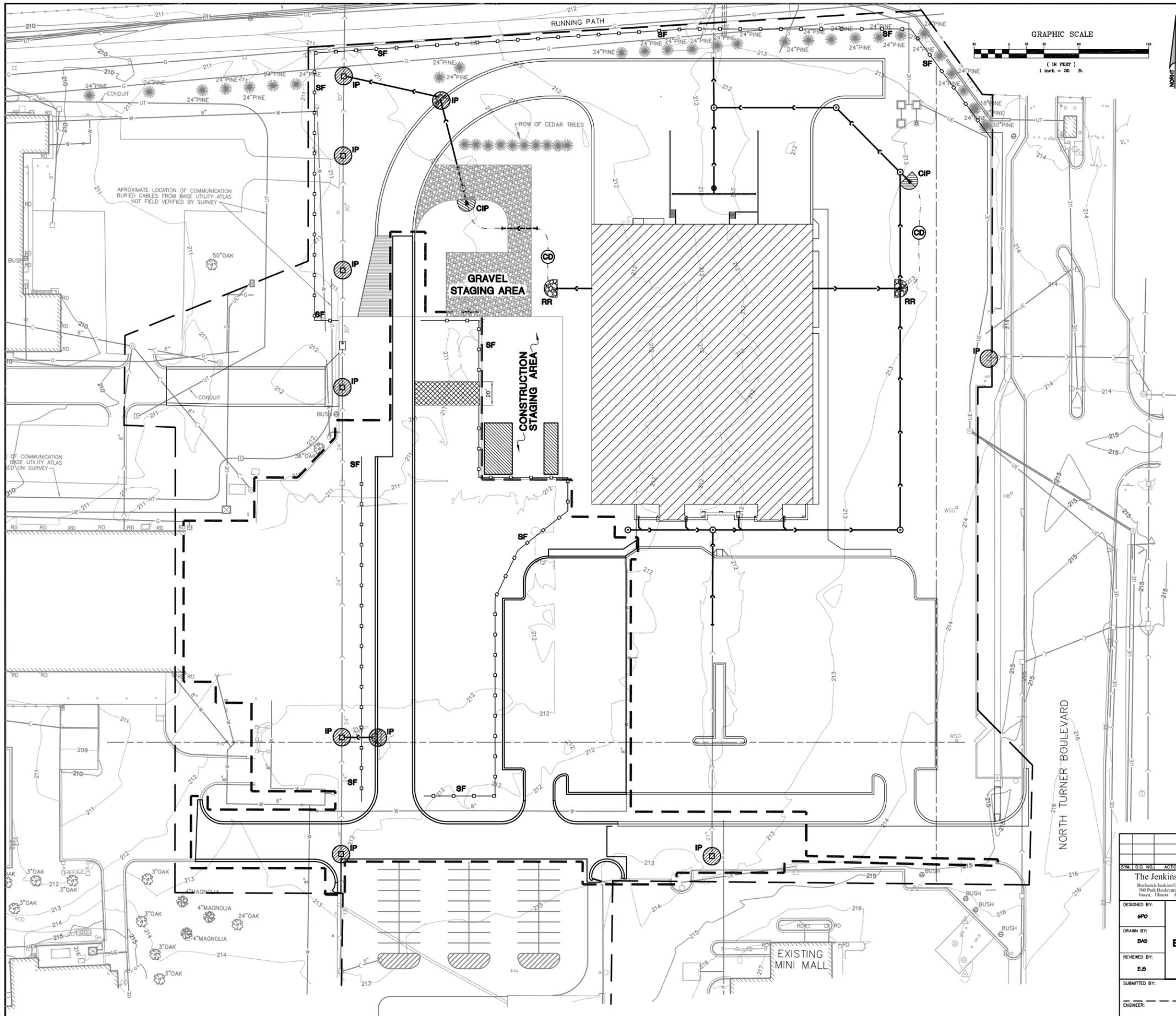
SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
Bochenek Jenkins Olsen Swobbe
300 Park Boulevard, Suite 250
Itasca, Illinois 60143-5146

DEFENSE COMMISSARY AGENCY
DIRECTORATE OF PERFORMANCE & POLICY
FORT LEE, VIRGINIA
LACKLAND AFB, TEXAS

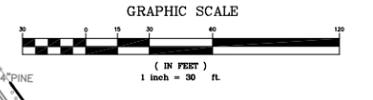
NEW COMMISSARY FACILITY
EROSION AND SEDIMENT CONTROL PLAN - STAGE II
MAXWELL A.F.B. - GUNTER ANNEX, AL

DESIGNED BY: GPO	DRAWN BY: BAG	REVIEWED BY: EJS	SUBMITTED BY:	ENGINEER:
PROJECT NO. DEMP03		SOL. NO.		DATE: 01 MAR 11
DRAWING NUMBER		SHEET NO. C12		SEQUENCE NO. OF



SYMBOL LEGEND

- EXISTING DRAINAGE STRUCTURE
- ⊙ EXISTING MANHOLE
- ⊕ EXISTING FIRE HYDRANT
- ⊛ EXISTING VALVE BOX
- HB ○ EXISTING HOSE BIB
- ⊞ EXISTING METER BOX
- ⊠ EXISTING LIGHT POLE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- - - EXISTING UNDERGROUND TELEPHONE
- - - ABANDONED UNDERGROUND TELEPHONE
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- ⊠ EXISTING ELECTRIC BOX
- ⊙ EXISTING DECIDUOUS TREE
- ⊙ EXISTING CONIFER TREE
- STAGE III LIMITS OF CONSTRUCTION
- SF ○ SILT FENCE, REF. DETAIL 1-C1.5
- ⊞ CONSTRUCTION EXIT PAD, REF. DETAIL 2-C1.5
- CIP ⊞ CULVERT INLET PROTECTION, REF. DETAIL 7-C1.5
- IP ⊞ DROP INLET PROTECTION, REF. DETAIL 4-C1.5
- RR ⊞ RIPRAP OUTLET PROTECTION, REF. DETAIL 3-C1.5
- ⊞ CHECK DAM - RIPRAP, REF. DETAIL 6-C1.5
- NEW ITEM TO BE CONSTRUCTED DURING PHASE
- NEW ITEM CONSTRUCTED DURING PREVIOUS PHASE
- - - TEMPORARY STORM SEWER



SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
Bochenek/Jenkins/Olsen/Sosabie
390 Park Boulevard, Suite 250
Itasca, Illinois 60143-5146

DEFENSE COMMISSARY AGENCY
DIRECTORATE OF PERFORMANCE & POLICY
FORT LEE, VIRGINIA
LACKLAND AFB, TEXAS

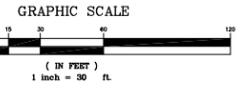
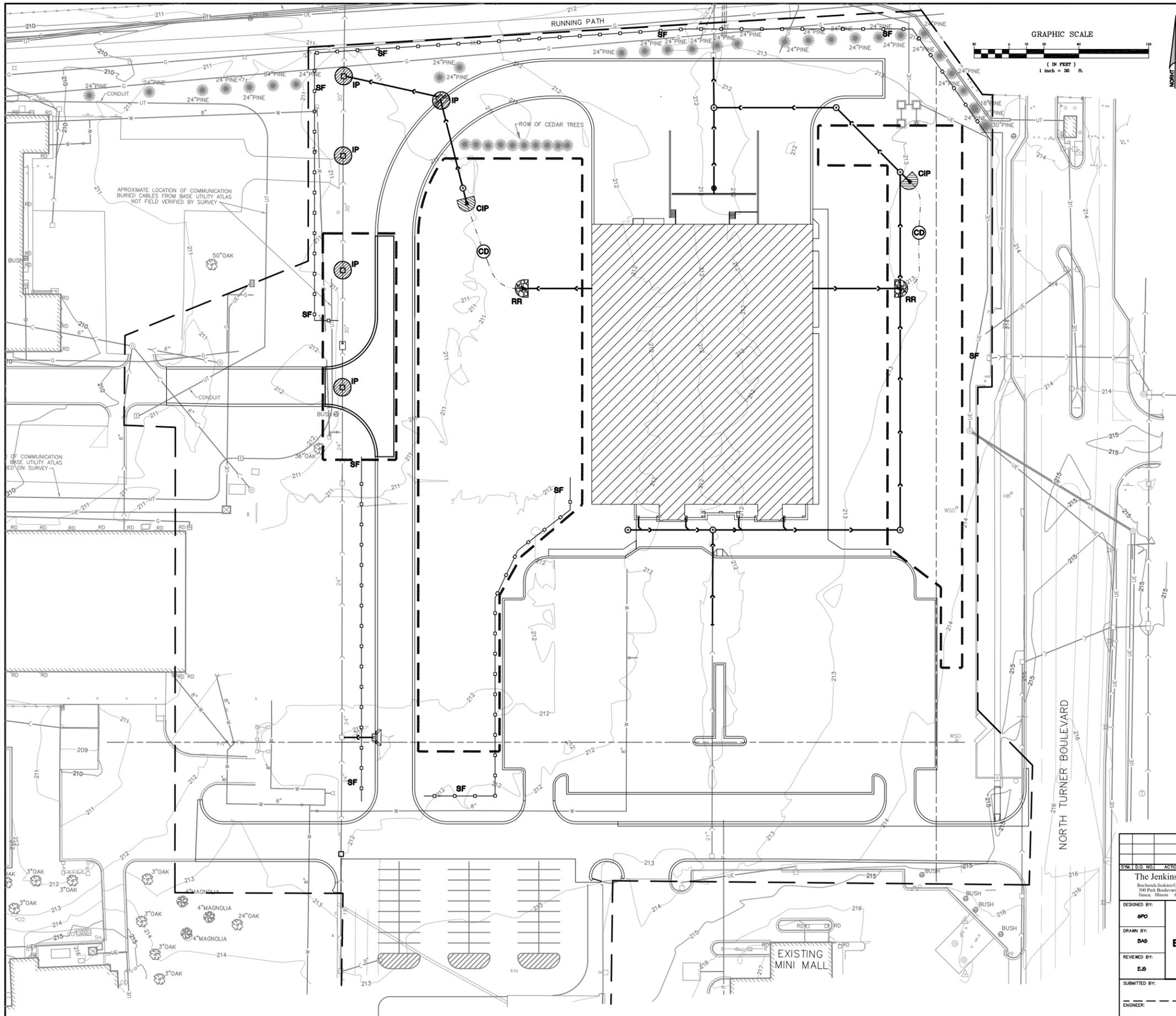
DESIGNED BY: GPO
DRAWN BY: BAG
REVIEWED BY: ELS
SUBMITTED BY: _____

**NEW COMMISSARY FACILITY
EROSION AND SEDIMENT CONTROL PLAN-
STAGE III**

MAXWELL A.F.B. - GUNTER ANNEX, AL

DATE: 01 MAR 11

SOL. NO. _____
PROJECT NO. **DE00003**
DRAWING NUMBER _____ SHEET NO. **C13**
SEQUENCE NO. _____
OF _____



SYMBOL LEGEND

- EXISTING DRAINAGE STRUCTURE
- ⊙ EXISTING MANHOLE
- ⊕ EXISTING FIRE HYDRANT
- ⊛ EXISTING VALVE BOX
- HB ○ EXISTING HOSE BIB
- ⊠ EXISTING METER BOX
- □ ○ □ EXISTING LIGHT POLE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- - - EXISTING UNDERGROUND TELEPHONE
- - - ABANDONED UNDERGROUND TELEPHONE
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- ⊠ EXISTING ELECTRIC BOX
- ⊙ EXISTING DECIDUOUS TREE
- ⊙ EXISTING CONIFER TREE
- STAGE IV LIMITS OF CONSTRUCTION
- SF ○ — SILT FENCE, REF. DETAIL 1-C1.5
- ⊠ CONSTRUCTION EXIT PAD, REF. DETAIL 2-C1.5
- CIP ⊠ — CULVERT INLET PROTECTION, REF. DETAIL 7-C1.5
- IP ⊠ — DROP INLET PROTECTION, REF. DETAIL 4-C1.5
- RR ⊠ — RIPRAP OUTLET PROTECTION, REF. DETAIL 3-C1.5
- CD ⊠ — CHECK DAM - RIPRAP, REF. DETAIL 6-C1.5
- NEW ITEM TO BE CONSTRUCTED DURING PHASE
- NEW ITEM CONSTRUCTED DURING PREVIOUS PHASE

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
Bochenek/Jenkins/Olsen/Swobbe
300 Park Boulevard, Suite 250
Itasca, Illinois 60143-5146

DEFENSE COMMISSARY AGENCY
DIRECTORATE OF PERFORMANCE & POLICY
FORT LEE, VIRGINIA
LACKLAND AFB, TEXAS

DESIGNED BY: GPO
DRAWN BY: BAG
REVIEWED BY: ELS
SUBMITTED BY: _____

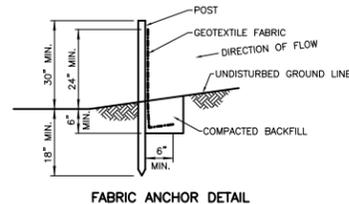
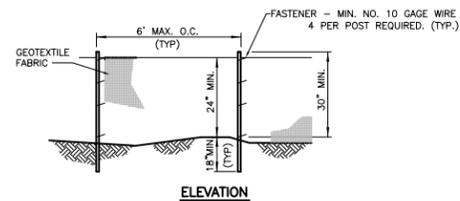
**NEW COMMISSARY FACILITY
EROSION AND SEDIMENT CONTROL PLAN-
STAGE IV**

MAXWELL A.F.B. - GUNTER ANNEX, AL

ENGINEER: _____

SOL. NO. _____ DATE: 01 MAR 11
PROJECT NO. DE000003 SEQUENCE NO. _____
DRAWING NUMBER _____ SHEET NO. _____ OF _____

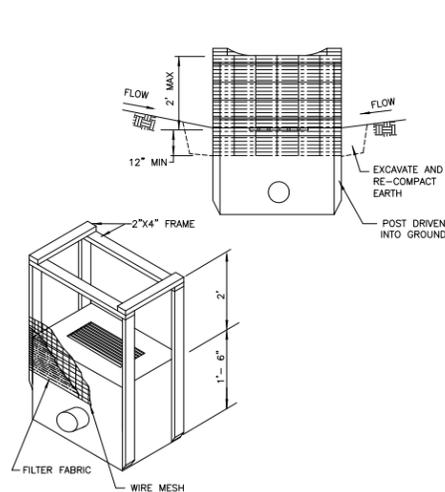
C14



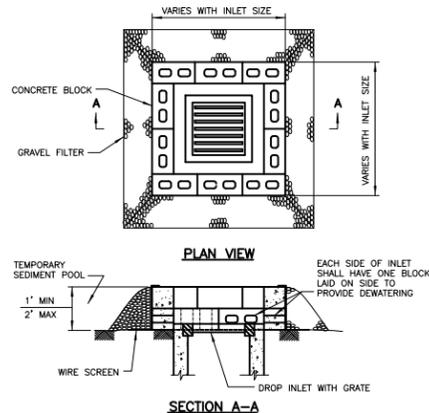
NOTES:

- TEMPORARY SEDIMENT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING.
- FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
- FENCE POST SHALL BE EITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM SECTIONAL AREA 3.0 SQ. IN.

1 SEDIMENT BARRIER - SILT FENCE DETAIL
C1.1-C1.4 | C1.5 NOT TO SCALE

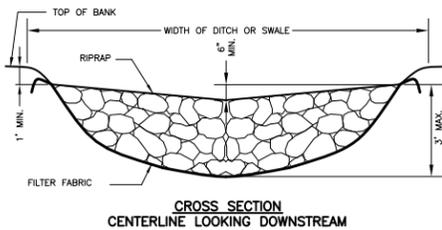
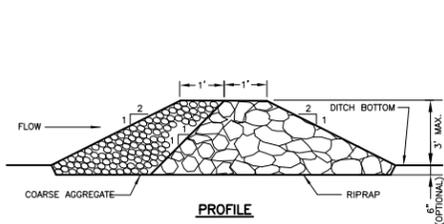


FILTER FABRIC



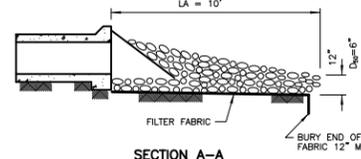
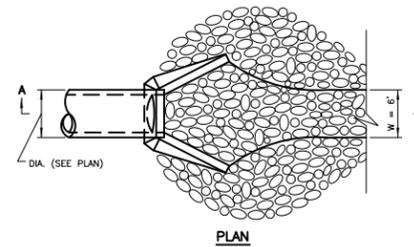
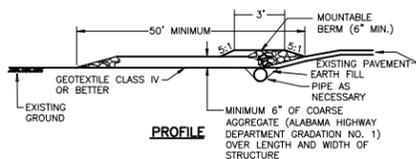
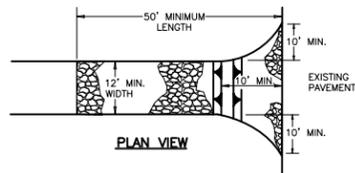
BLOCK AND GRAVEL

4 DROP INLET PROTECTION
C1.1-C1.4 | C1.5 NOT TO SCALE

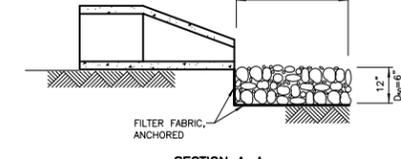
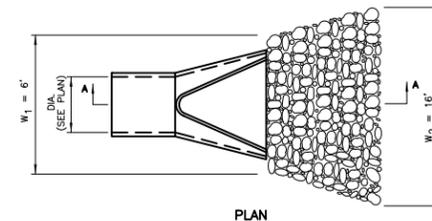


6 CHECK DAM - RIPRAP
C1.2-C1.4 | C1.5 NOT TO SCALE

2 CONSTRUCTION EXIT PAD
C1.1-C1.4 | C1.5 NOT TO SCALE

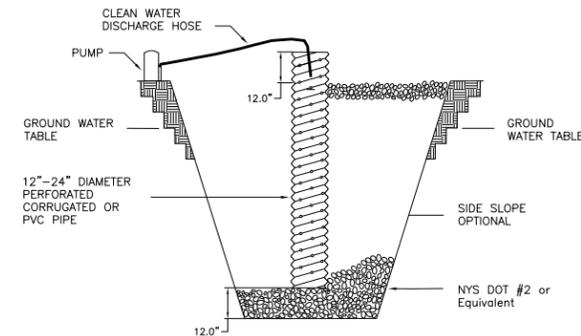


PIPE OUTLET TO CHANNEL



PIPE OUTLET TO FLAT AREA

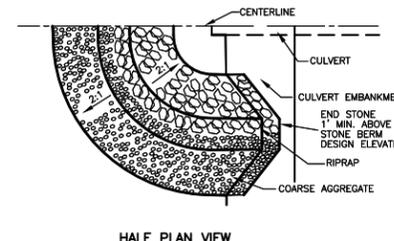
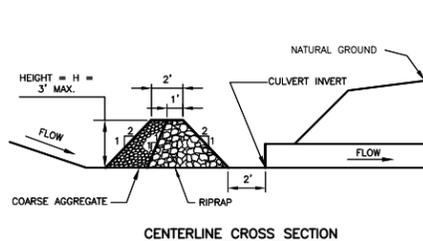
3 RIPRAP OUTLET PROTECTION
C1.2-C1.4 | C1.5 NOT TO SCALE



NOTES:

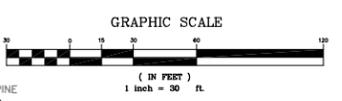
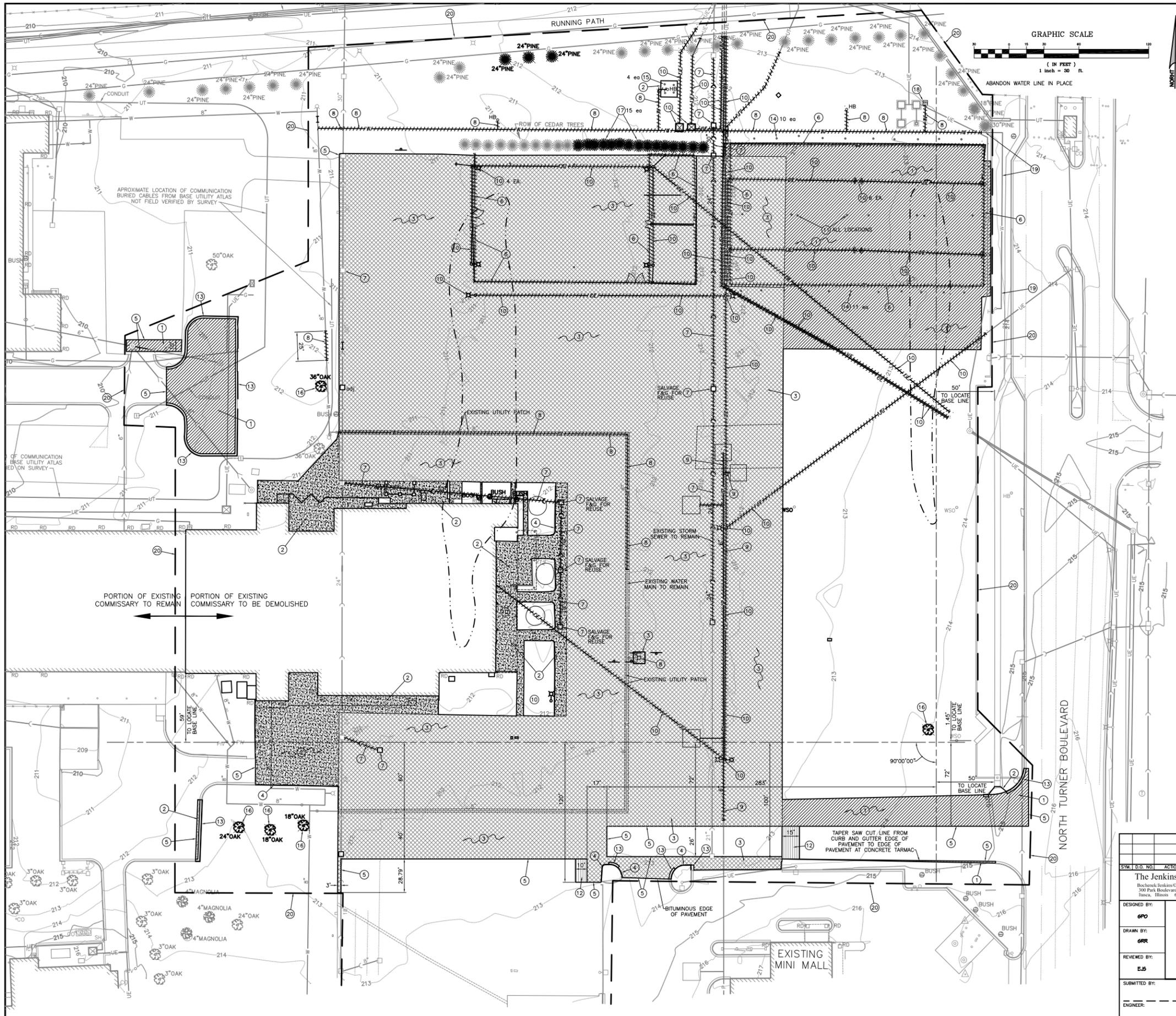
- PIT DIMENSIONS ARE OPTIONAL.
- THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12"-24" DIAMETER CORRUGATED OR PVC PIPE.
- A BASE OF 2" AGGREGATE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD BE BACKFILLED WITH 2" AGGREGATE.
- THE STANDPIPE SHOULD EXTEND 12-18" ABOVE THE LIP OF THE PIT.
- IF DISCHARGE WILL BE PUMPED DIRECTLY TO A STORM DRAINAGE SYSTEM, THE STANDPIPE SHOULD BE WRAPPED WITH FILTERCLOTH BEFORE INSTALLATION. IF DESIRED, 1/4"-1/2" HARDWARE CLOTH MAY BE PLACED AROUND THE STANDPIPE, PRIOR TO ATTACHING THE FILTERCLOTH.

6 SUMP PIT
C1.5 NOT TO SCALE



7 CULVERT INLET PROTECTION
C1.2-C1.4 | C1.5 NOT TO SCALE

SYM.	S.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION
The Jenkins Group Bochenko/Jenkins/Olsen/Snoke 300 Park Boulevard, Suite 250 Itasca, Illinois 60143-3146				
DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS				
DESIGNED BY:	GPO			
DRAWN BY:	BAS			
REVIEWED BY:	EJS			
SUBMITTED BY:				
ENGINEER:				
NEW COMMISSARY FACILITY SEDIMENT AND EROSION CONTROL DETAILS MAXWELL A.F.B. - GUNTER ANNEX, AL.		SOL. NO. _____ DATE: 01 MAR 11 PROJECT NO. DEOMPOS SEQUENCE NO. _____ DRAWING NUMBER _____ SHEET NO. OF C15		



- ### KEYED NOTES
- 1 REMOVE BITUMINOUS PAVEMENT - MAY BE UNDERLAIN BY CONCRETE TARMAC
 - 2 REMOVE CONCRETE SIDEWALK/PAVING
 - 3 REMOVE REINFORCED TARMAC
 - 4 REMOVE CONCRETE CURB
 - 5 SAW CUT PAVEMENT (FULL DEPTH)
 - 6 REMOVE EXISTING CHAIN LINK FENCE
 - 7 REMOVE DRAINAGE STRUCTURE OR SEWER
 - 8 REMOVE FIRE HYDRANT, VALVE BOX OR WATER MAIN
 - 9 REMOVE PETROLEUM LINE
 - 10 REMOVE ELECTRIC CABLE, ELECTRIC BOX OR LIGHTING UNIT
 - 11 REMOVE EXISTING TENNIS COURT EQUIPMENT
 - 12 15' BUTT JOINT, REF. DETAIL 15-C4.1
 - 13 REMOVE CONCRETE CURB AND GUTTER
 - 14 REMOVE BRACE POST
 - 15 REMOVE BUMPER POST
 - 16 REMOVE DECIDUOUS TREE
 - 17 REMOVE CONIFER TREE
 - 18 REMOVE METER BOX
 - 19 ABANDON WATER LINE IN PLACE
 - 20 PROJECT LIMIT LINE

- ### SYMBOL LEGEND
- EXISTING DRAINAGE STRUCTURE
 - ⊙ EXISTING MANHOLE
 - ⊠ EXISTING FIRE HYDRANT
 - EXISTING VALVE BOX
 - HB ⊙ EXISTING HOSE BIB
 - ⊠ EXISTING METER BOX
 - ⊠ EXISTING LIGHT POLE
 - EXISTING STORM SEWER
 - EXISTING SANITARY SEWER
 - EXISTING WATER MAIN
 - EXISTING UNDERGROUND ELECTRIC
 - EXISTING UNDERGROUND TELEPHONE
 - - - - - ABANDONED UNDERGROUND TELEPHONE
 - ~ MINOR CONTOUR LINE
 - MAJOR CONTOUR LINE
 - ⊠ EXISTING ELECTRIC BOX
 - ○ REMOVE DRAINAGE STRUCTURE
 - adj □ ○ ADJUST DRAINAGE STRUCTURE RIM ELEVATION
 - ⊙ REMOVE MANHOLE
 - ⊠ REMOVE FIRE HYDRANT
 - REMOVE VALVE BOX
 - ⊠ REMOVE METER BOX
 - ⊠ REMOVE ELECTRIC BOX
 - ++++ REMOVE STORM SEWER
 - ++++ REMOVE SANITARY SEWER
 - ++++ REMOVE WATER MAIN
 - ++++ REMOVE UNDERGROUND ELECTRIC
 - ++++ REMOVE UNDERGROUND TELEPHONE
 - ▨ REMOVE BITUMINOUS PAVEMENT
 - ▨ REMOVE CONCRETE SIDEWALK/PAVEMENT
 - ▨ REMOVE CONCRETE REINFORCED TARMAC
 - ▨ 1 1/2\"/>

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
 Hochstein Jenkins Olsen Swable
 300 Park Boulevard, Suite 250
 Itasca, Illinois 60143-5146

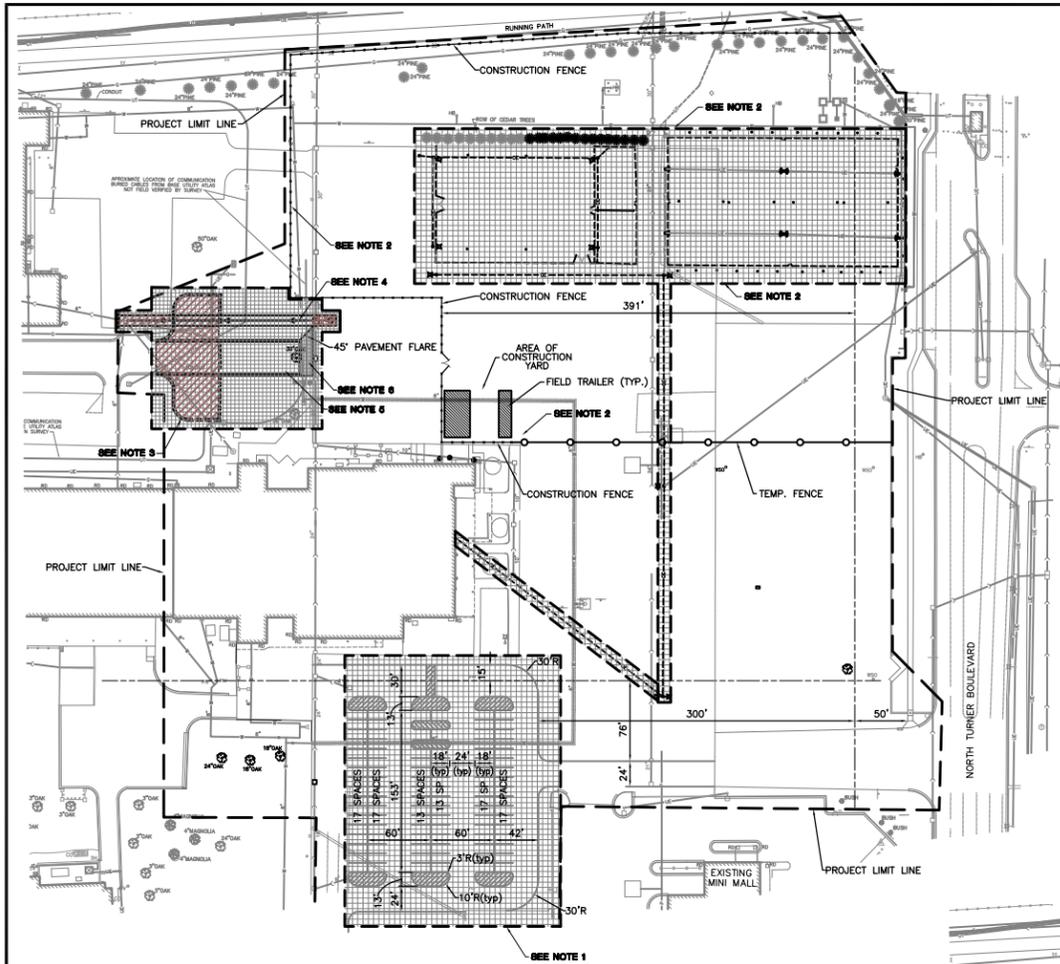
DEFENSE COMMISSARY AGENCY
 DIRECTORATE OF PERFORMANCE & POLICY
 FORT LEE, VIRGINIA
 LACKLAND AFB, TEXAS

NEW COMMISSARY FACILITY

SITE DEMOLITION PLAN

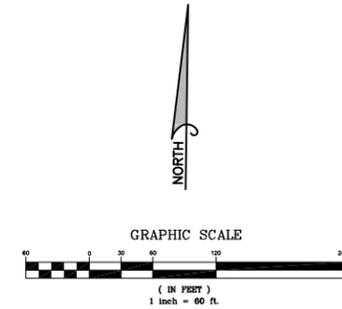
MAXWELL A.F.B. - GUNTER ANNEX, AL.

DESIGNED BY: GPO	SOL. NO.	DATE: 01 MAR 11
DRAWN BY: GRR	PROJECT NO. DE00P03	SEQUENCE NO.
REVIEWED BY: EJS	DRAWING NUMBER	SHEET NO. OF
SUBMITTED BY:		
ENGINEER:		C21



STAGE I-A

1. STRIPE NEW TEMPORARY PARKING AREA PAVEMENT MARKINGS AS SHOWN ON STAGE I-A PLAN.
2. BEGIN TO SET UP CONSTRUCTION FENCE, TEMP FENCE AND CONSTRUCTION YARD AT THE NORTHEAST CORNER OF EXISTING COMMISSARY.
3. REMOVE EXISTING BITUMINOUS PAVEMENT AND CONCRETE CURB AND GUTTER.
4. CONSTRUCT NEW SANITARY SEWER ALONG WITH INTERFERENCE BOX AND MANHOLE.
5. CONSTRUCT NEW PAVEMENT AND CONCRETE CURB AND GUTTER TO BEGINNING OF RADIUS RETURN.
6. ADD TEMPORARY BITUMINOUS PAVEMENT BETWEEN NEW PAVEMENT AND EXISTING CONCRETE TARMAC PAVEMENT. MATCH ELEVATION OF NEW AND EXISTING PAVEMENTS.
7. REMOVE ALL ABOVE GROUND EXISTING TOPO FEATURE. (FENCES, POWER POLES, LIGHT POLES, OVERHEAD ELECTRIC AND TREES. LEAVE FIRE HYDRANTS OR OTHER WATER APPURTANANCES IN PLACE UNTIL AFTER PAVEMENT REMOVAL.
8. EXISTING COMMISSARY TO REMAIN OPEN AND TOTALLY FUNCTIONAL AT ALL TIMES.

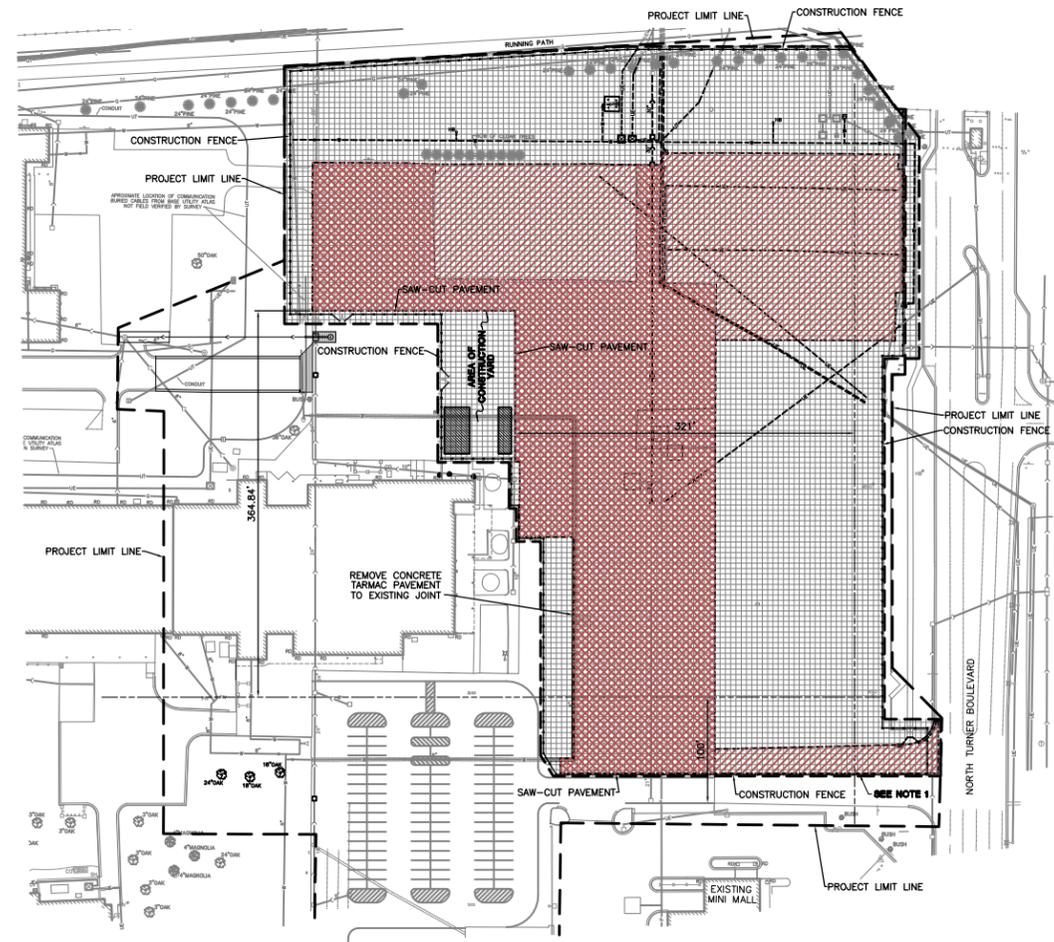


STAGE I-B

1. COMPLETE SET UP OF CONSTRUCTION FENCE AROUND REMAINING WORK AREA.
2. REMOVE EXISTING CONCRETE TARMAC AND BITUMINOUS PAVEMENT.
3. REMOVE EXISTING UNDERGROUND UTILITIES AS SHOWN. MAINTAIN SERVICE TO ALL SURROUNDING BUILDINGS AND USES AT ALL TIMES.

NOTE:

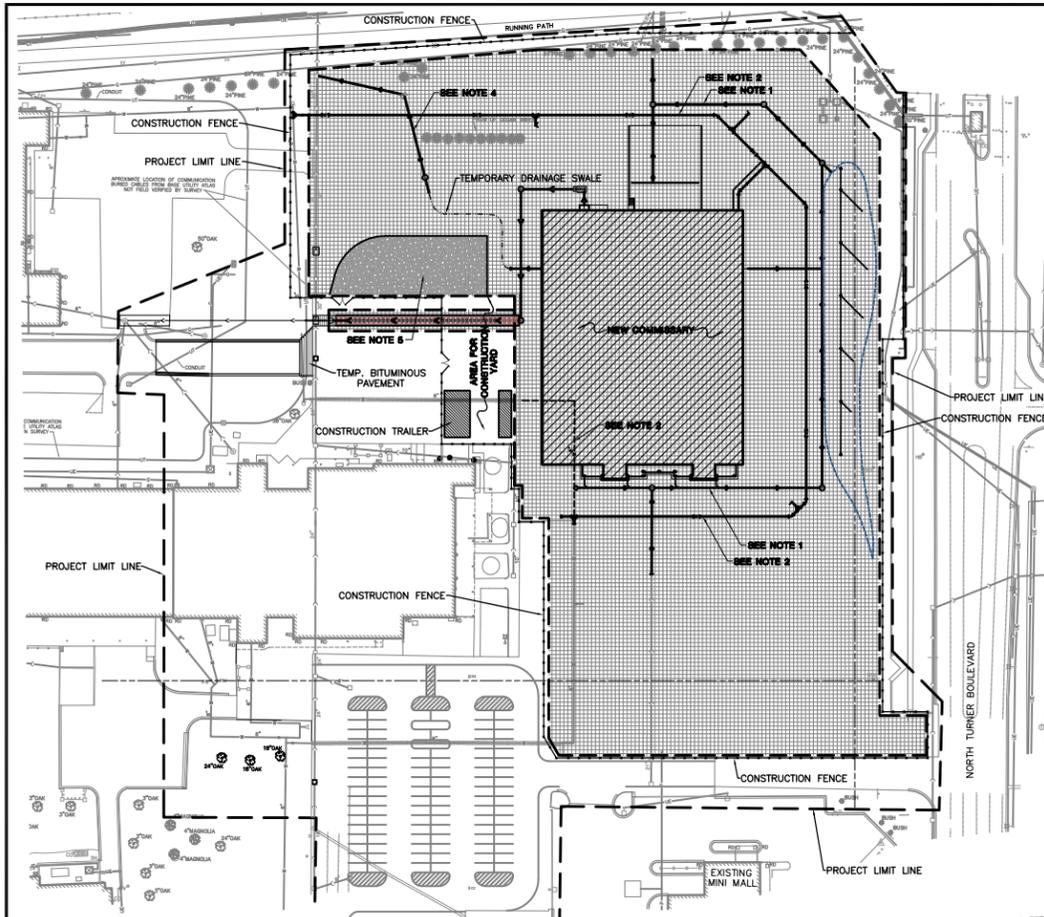
THE SITE STAGING PLANS ARE NOT INTENDED TO BE USED TO CONSTRUCT THE PROJECT, BUT RATHER TO INDICATE WORK AREAS AND OFFER POSSIBLE ALTERNATIVES FOR MAINTAINING ACCESS AND DRAINING THESE WORK AREAS DURING CONSTRUCTION. REFER TO SHEETS C2.1, C3.1, C5.1, C6.1, C7.1, L1.1 AS WELL AS APPLICABLE DETAILS FOR INFORMATION REGARDING CONSTRUCTION OF THE IMPROVEMENTS.



LEGEND

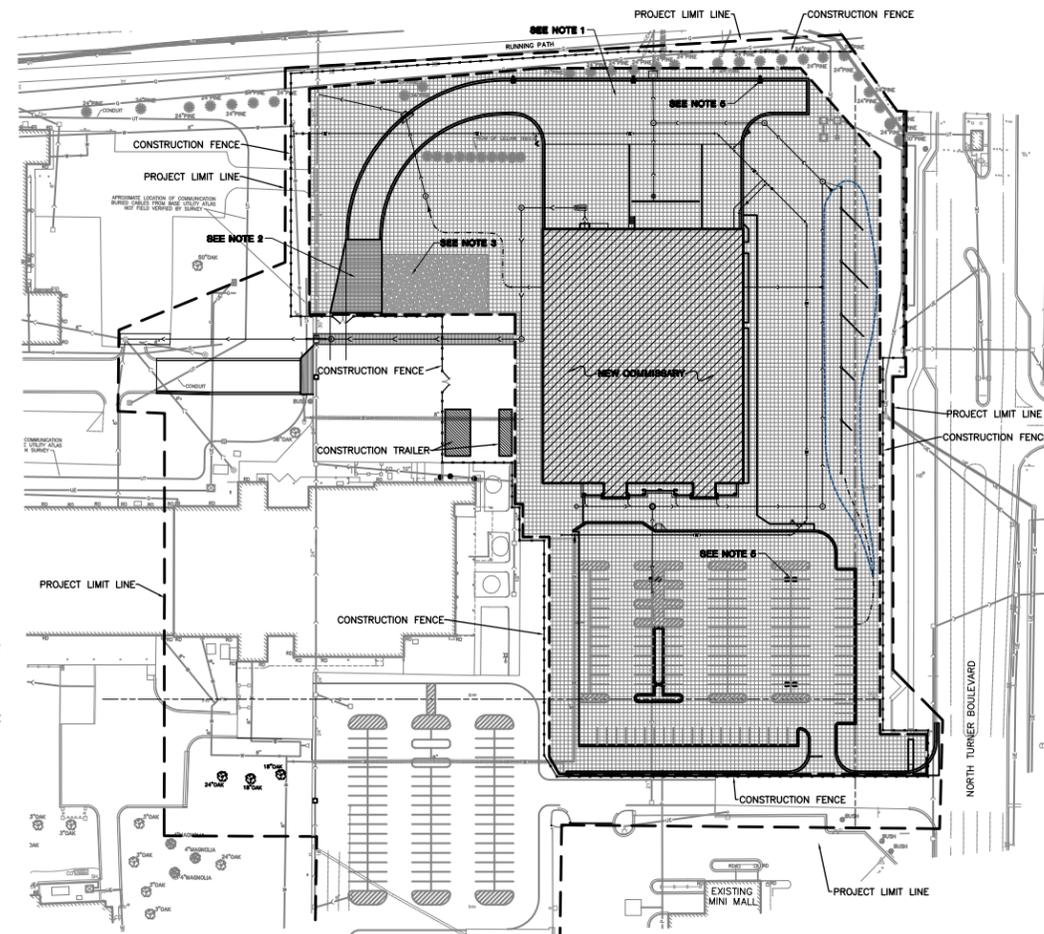
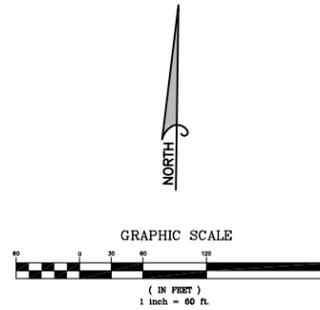
- BITUMINOUS PAVEMENT REMOVAL
- CONCRETE TARMAC REMOVAL
- TEMPORARY BITUMINOUS PAVEMENT
- STAGE WORK AREA
- TO BE REMOVED
- NEW ITEM TO BE CONSTRUCTED DURING CURRENT STAGE
- NEW ITEM CONSTRUCTED DURING PREVIOUS STAGE
- UTILITY TO BE REMOVED (SEE SHEET C2.1 FOR UTILITY LEGEND)
- CONSTRUCTION FENCE
- NEW SANITARY SEWER

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION
The Jenkins Group Hochens/Jenkins/Olsen/Stable 300 Park Boulevard, Suite 250 Itasca, Illinois 60143-5146				 DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS
NEW COMMISSARY FACILITY SITE STAGING PLAN - STAGE I				
MAXWELL A.F.B. - GUNTER ANNEX, AL.				
DESIGNED BY:	SOL. NO.			DATE: 01 MAR 11
DRAWN BY:	PROJECT NO. DECP03			SEQUENCE NO.
REVIEWED BY:	DRAWING NUMBER			SHEET NO. OF
ENGINEER:				C22



STAGE II-A

1. CONSTRUCT NEW STORM SEWER, SANITARY SEWER AND ROUGH SITE GRADING WITHIN STAGE II-A WORK AREA.
2. CONSTRUCT NEW WATER MAIN AND REMOVE EXISTING MAIN BEFORE BEGINNING CONSTRUCTION OF NEW BUILDING.
3. BEGIN CONSTRUCTION OF NEW BUILDING AND SERVICE AREA.
4. CONSTRUCT A PORTION OF NEW STORM SEWER FOR ROOF DRAINS ON WEST SIDE OF COMMISSARY. PROVIDE A TEMPORARY DRAINAGE SWALE TO NEW CONCRETE FLARED END SECTION.
5. INSTALL GRAVEL STAGING AREA AND TRUCK ENTRANCE.



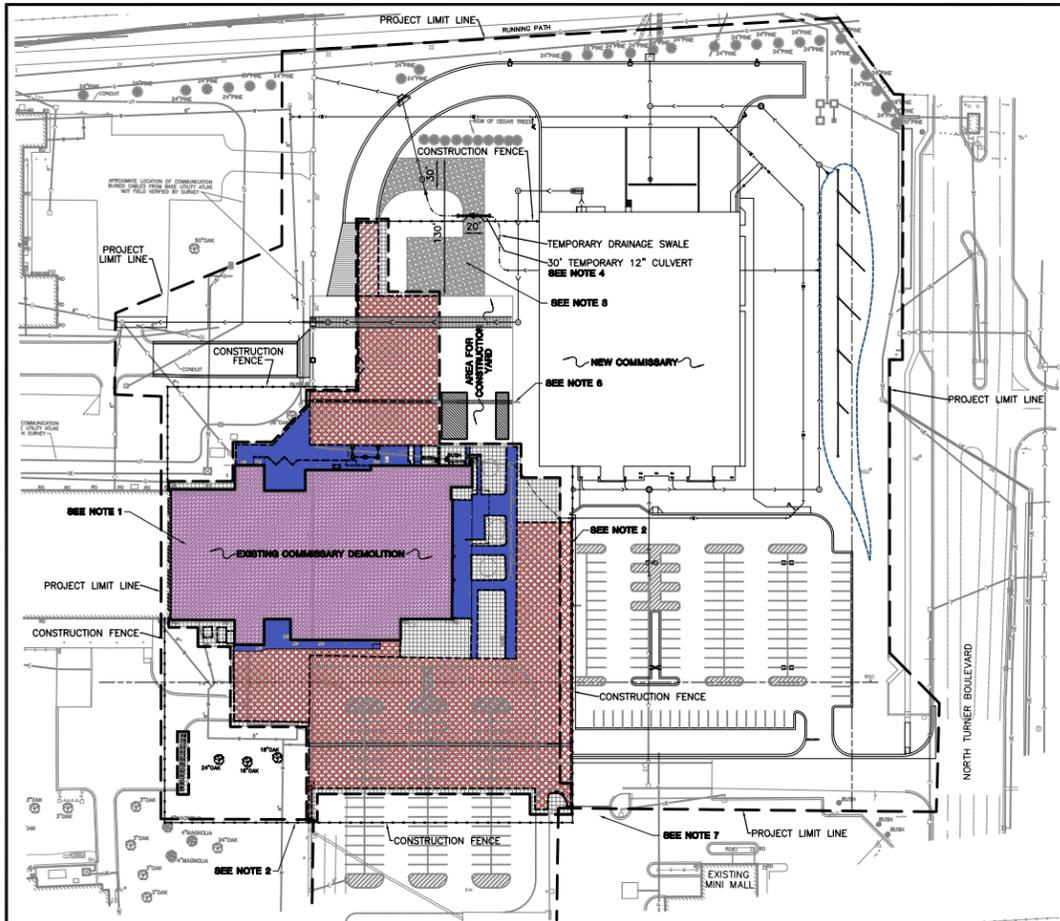
STAGE II-B

1. CONSTRUCT NEW LOADING AREA AND LOADING AREA ACCESS DRIVE UP TO BINDER COURSE AFTER ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED AND NEW BUILDING EXTERIOR IS COMPLETE. CONSTRUCT ACCESS DRIVE TO RADIUS POINT AS SHOWN ON PLAN.
2. CONSTRUCT TEMPORARY BITUMINOUS PAVEMENT BETWEEN NEW PAVEMENT AND EXISTING CONCRETE TARMAc PAVEMENT. MATCH GRADES BETWEEN NEW AND EXISTING PAVEMENT.
3. ADJUST GRAVEL CONSTRUCTION STAGING AREA AS NECESSARY.
4. CONSTRUCT THE INDICATED PORTION OF THE NEW BITUMINOUS PARKING LOT PAVEMENT AND CURB AND GUTTER LOCATED TO THE SOUTH OF THE NEW COMMISSARY UP TO THE BINDER COURSE.
5. INSTALL NEW PARKING AREA LIGHTING.
6. INSTALL TEMPORARY PAVEMENT MARKING FOR THE NEW FRONT PARKING LOT.

LEGEND

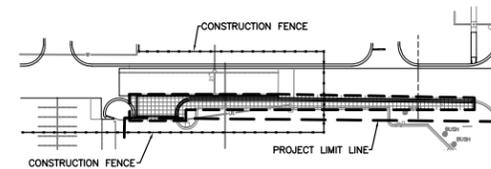
- STAGE WORK AREA
- NEW GRAVEL CONSTRUCTION STAGING AREA
- TEMPORARY BITUMINOUS PAVEMENT
- UTILITY TO BE REMOVED (SEE SHEET C2.1 FOR UTILITY LEGEND)
- NEW UNDERGROUND UTILITY (SEE SHEET C6.1 FOR UTILITY LEGEND)
- NEW UNDERGROUND UTILITY CONSTRUCTED DURING PREVIOUS STAGE
- CONSTRUCTION FENCE
- NEW ITEM TO BE CONSTRUCTED DURING CURRENT STAGE
- NEW ITEM CONSTRUCTED DURING PREVIOUS STAGE

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION
<p>The Jenkins Group Bochenski Jenkins Olsen Swobbe 300 Park Boulevard, Suite 250 Itasca, Illinois 60143-5146</p>				
<p>DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS</p>				
<p>NEW COMMISSARY FACILITY SITE STAGING PLAN - STAGE II</p>				
<p>MAXWELL A.F.B. - GUNTER ANNEX, AL</p>				
DESIGNED BY:	GPO			
DRAWN BY:	GRR			
REVIEWED BY:	EJS			
SUBMITTED BY:				
ENGINEER:				
SOL. NO.		DATE: 01 MAR 11		SEQUENCE NO.
PROJECT NO. DEOP03		DRAWING NUMBER		SHEET NO. OF
				C23



STAGE III-A

1. AFTER STAGES II-A AND II-B ARE COMPLETED AND COMMISSARY IS FULLY FUNCTIONAL BEGIN DEMOLITION OF OLD COMMISSARY AS SHOWN ON DEMOLITION PLAN.
2. REMOVE AND RELOCATE CONSTRUCTION FENCE, AS NECESSARY TO PROTECT THE ACTIVE CONSTRUCTION AREA.
3. ADJUST GRAVEL CONSTRUCTION STAGING AREA AS SHOWN
4. ADD TEMPORARY DRAINAGE CULVERT UNDER GRAVEL DRIVEWAY.
5. REMOVE EXISTING CONCRETE TARMAK, BITUMINOUS AND CONCRETE PAVEMENT/SIDEWALK.
6. REMOVE A PORTION OF WATER MAIN AS SHOWN.
7. PARKING AREA ACCESS DRIVE AND NORTH ENTRANCE TO THE MINI MALL/GAS STATION TO REMAIN OPEN DURING THIS STAGE.

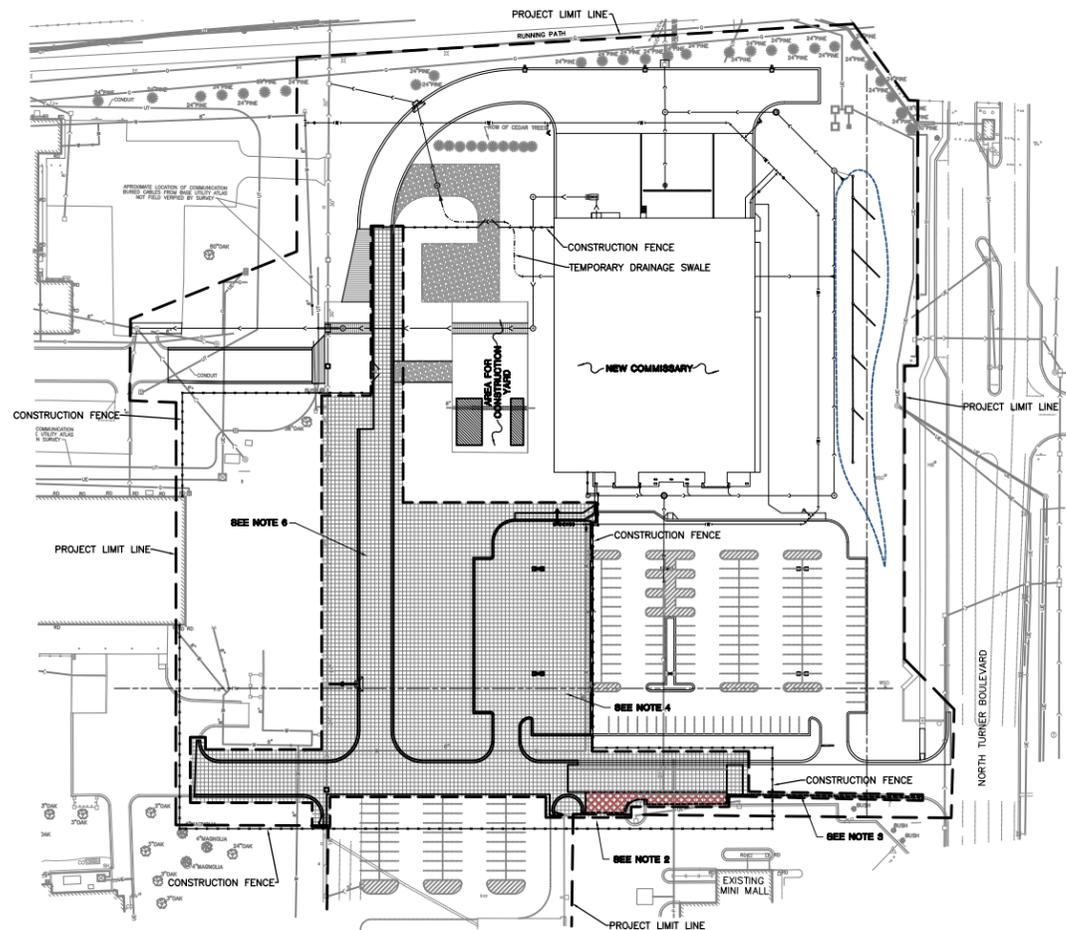


STAGE III-C

1. CONSTRUCT NEW CURB AND GUTTER AND PAVEMENT UP TO NEW BINDER COURSE.
2. NEW COMMISSARY ENTRANCE TO REMAIN OPEN AT ALL TIMES

STAGE III-B

1. AFTER DEMOLITION IS COMPLETED, CONSTRUCT REMAINING STORM SEWER, WATER MAIN AND INSTALL REMAINING PARKING AREA LIGHTING.
2. CLOSE NORTHERN ENTRANCE TO MINI MALL/GAS STATION AT PARKING AREA ACCESS DRIVE. ENTRANCE TO NEW COMMISSARY TO REMAIN OPEN AT ALL TIMES.
3. REMOVE CONCRETE CURB AND GUTTER AND PAVEMENT ALONG SOUTH EDGE OF PAVEMENT.
4. CONSTRUCT REMAINDER OF COMMISSARY FRONT PARKING AREA AND COMMISSARY TRUCK DOCK ACCESS DRIVE. TRUCK DOCK IS TO REMAIN FULLY FUNCTIONAL AT ALL TIMES. ONLY CONSTRUCT HALF OF NEW ACCESS DRIVE TO KEEP TRUCK DOCK FUNCTIONAL.
5. CONSTRUCT ACCESS DRIVE IN THE AREA OF THE OLD COMMISSARY.



LEGEND

- BITUMINOUS PAVEMENT REMOVAL
- CONCRETE TARMAK REMOVAL
- TEMPORARY BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT/SIDEWALK REMOVAL
- WORK AREA
- NEW GRAVEL CONSTRUCTION STAGING AREA
- TO BE REMOVED
- NEW ITEM TO BE CONSTRUCTED DURING CURRENT STAGE
- NEW ITEM CONSTRUCTED DURING PREVIOUS STAGE
- CONSTRUCTION FENCE
- UTILITY TO BE REMOVED (SEE SHEET C2.1 FOR UTILITY LEGEND)
- NEW UNDERGROUND UTILITY (SEE SHEET C6.1 FOR UTILITY LEGEND)

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
Bochenek Jenkins Olsen/Snooble
300 Park Boulevard, Suite 250
Itasca, Illinois 60143-5146

DEFENSE COMMISSARY AGENCY
DIRECTORATE OF PERFORMANCE & POLICY
FORT LEE, VIRGINIA
LACKLAND AFB, TEXAS

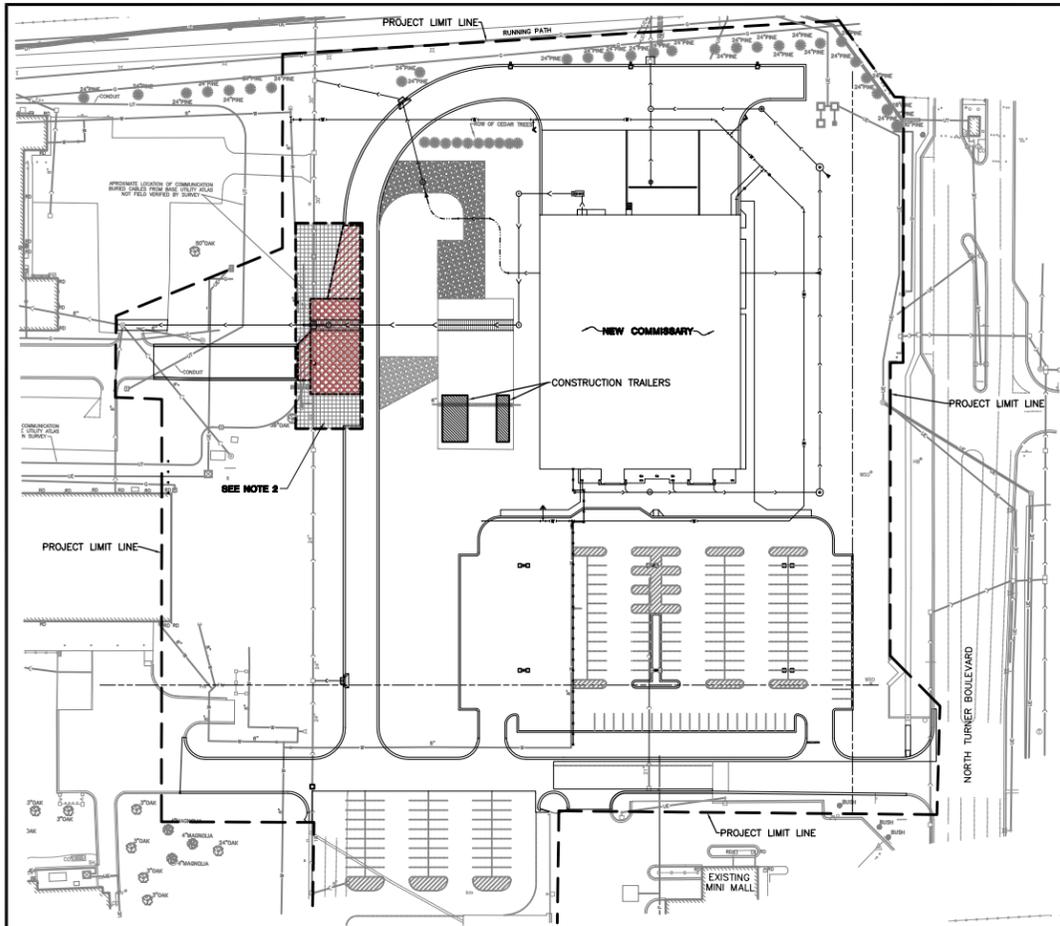
DESIGNED BY: GPO
DRAWN BY: GRR
REVIEWED BY: EJS
SUBMITTED BY:

NEW COMMISSARY FACILITY
SITE STAGING PLAN - STAGE III
MAXWELL A.F.B. - GUNTER ANNEX, AL

DATE: 01 MAR 11

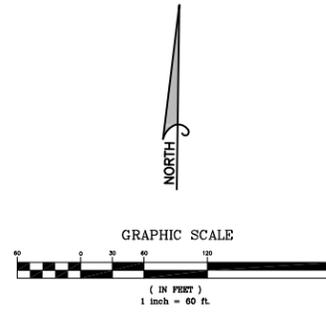
SEQUENCE NO.: C24

DRAWING NUMBER: SHEET NO. OF



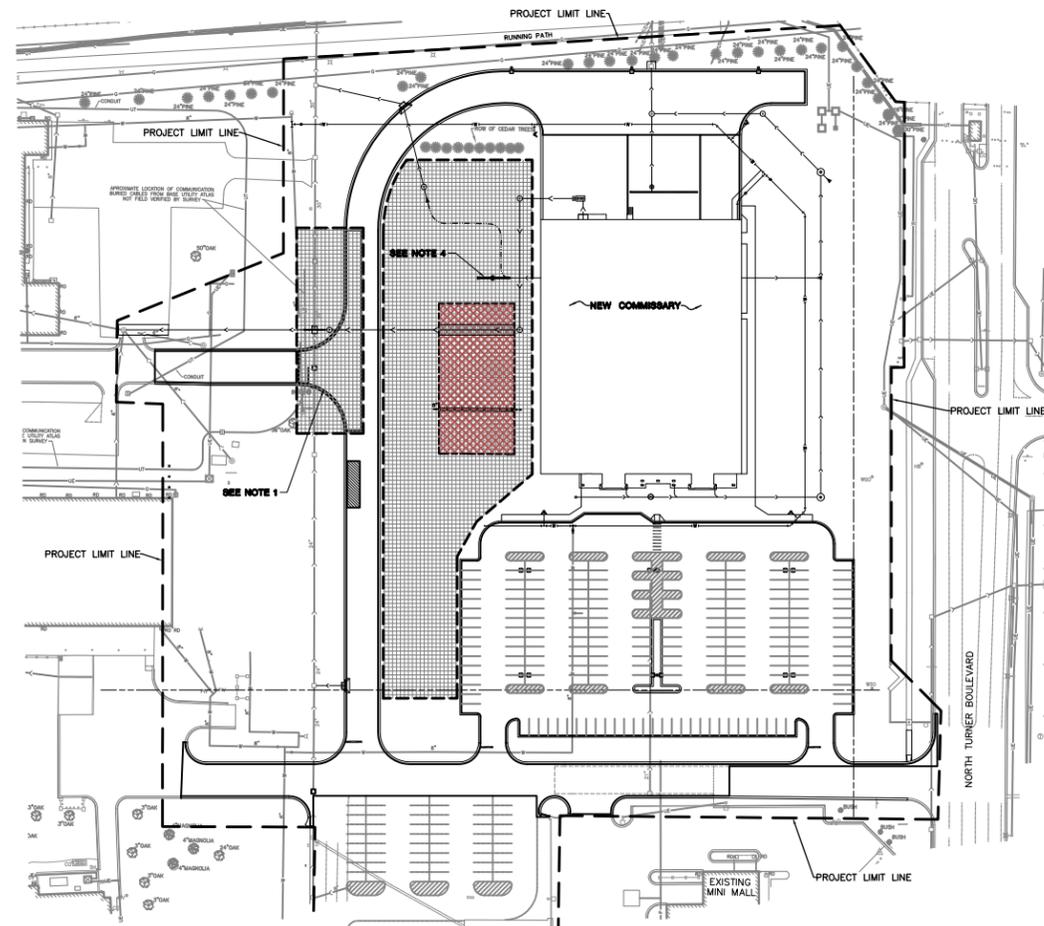
STAGE IV-A

1. AFTER COMPLETION OF STAGE III-B, REMOVE REMAINDER OF CONCRETE TARMAC PAVEMENT AND TEMPORARY PAVEMENT.
2. NEW COMMISSARY TRUCK DOCK ACCESS DRIVE IS TO REMAIN TOTALLY FUNCTIONAL DURING CONSTRUCTION OF THE REMAINDER OF THE ACCESS DRIVE.



STAGE IV-B

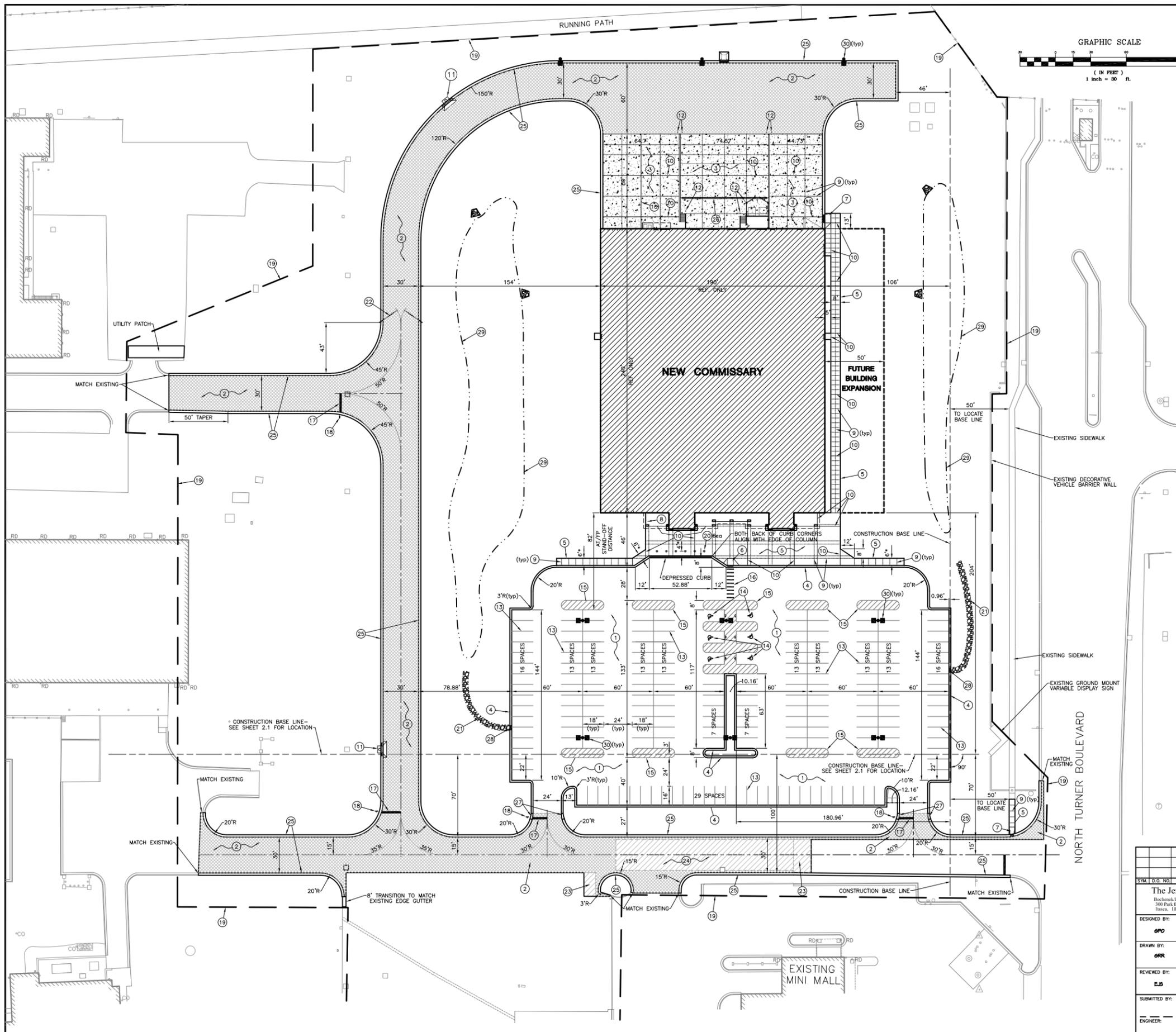
1. CONSTRUCT REMAINDER OF TRUCK DOCK ACCESS DRIVE UP TO BINDER COURSE.
2. REMOVE REMAINING CONCRETE TARMAC PAVEMENT AT CONSTRUCTION STAGING AREA.
3. REMOVE REMAINING EXISTING WATER MAIN.
4. ADD REMAINING ROOF DRAIN STORM SEWER AT WEST SIDE OF COMMISSARY.
5. AFTER COMPLETION OF REMAINING ACCESS DRIVE CONSTRUCTION APPLY FINAL SURFACE COURSE PAVEMENT TO ENTIRE NEW COMMISSARY SITE.
6. INSTALL NEW PERMANENT PAVEMENT MARKINGS.
7. WHEN CONSTRUCTION STAGING AREA IS REMOVED, BEGIN FINAL GRADING AND LANDSCAPING TO THE WEST OF THE NEW COMMISSARY.



LEGEND

- BITUMINOUS PAVEMENT REMOVAL
- CONCRETE TARMAC REMOVAL
- TEMPORARY BITUMINOUS PAVEMENT
- STAGE WORK AREA
- NEW GRAVEL CONSTRUCTION STAGING AREA
- TO BE REMOVED
- NEW ITEM TO BE CONSTRUCTED DURING CURRENT STAGE
- NEW ITEM CONSTRUCTED DURING PREVIOUS STAGE
- UTILITY TO BE REMOVED (SEE SHEET C2.1 FOR UTILITY LEGEND)

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION
<p>The Jenkins Group Bochenek Jenkins Olsen Swobbe 300 Park Boulevard, Suite 250 Itasca, Illinois 60143-5146</p>				
<p>DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS</p>				
<p>NEW COMMISSARY FACILITY SITE STAGING PLAN - STAGE IV MAXWELL A.F.B. - GUNTER ANNEX, AL</p>				
DESIGNED BY:	SOL. NO.			
6FO	DATE: 01 MAR 11			
DRAWN BY:	PROJECT NO. DECP03			
GRR	SEQUENCE NO.			
REVIEWED BY:	DRAWING NUMBER			
EJS	SHEET NO. OF			
SUBMITTED BY:	ENGINEER			
				C2.5



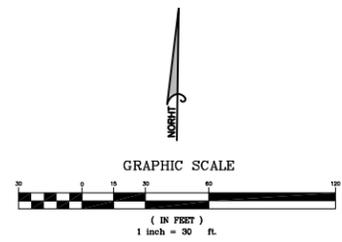
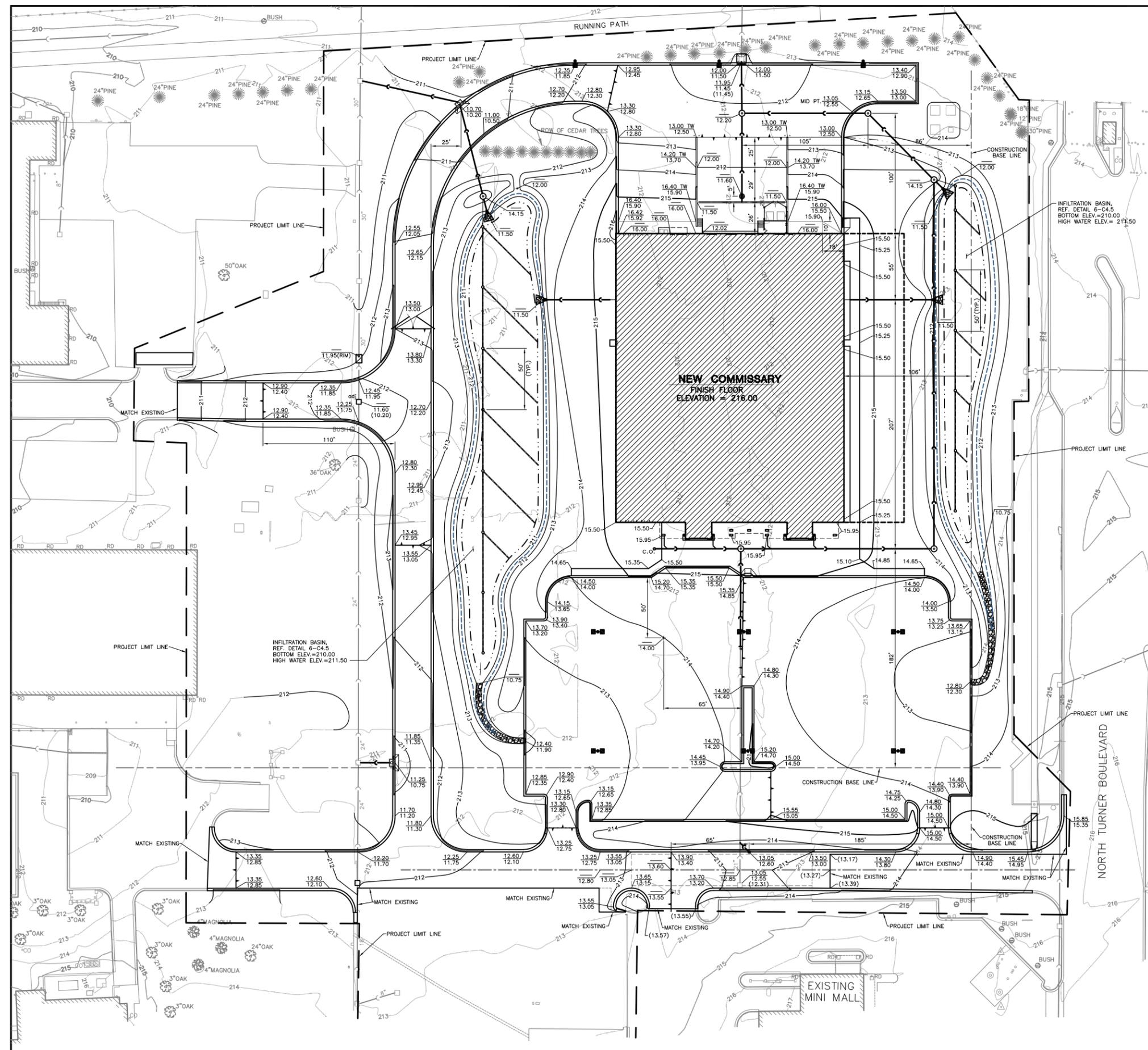
- KEYED NOTES**
- 1 PARKING AREA PAVEMENT, REF. DETAIL 1-C4.1
 - 2 HEAVY DUTY PAVEMENT, REF. DETAIL 2-C4.1
 - 3 CONCRETE LOADING AREA PAVEMENT, REF. DETAIL 3-C4.1
 - 4 CONCRETE CURB AND GUTTER, TYPE B-6.12, REF. DETAIL 6-C4.1
 - 5 CONCRETE SIDEWALK, REF. DETAIL 5-C4.1
 - 6 SIDEWALK RAMP TYPE A, REF. DETAIL 8-C4.1
 - 7 FORKLIFT RAMP, REF. DETAIL 9-C4.1
 - 8 THICKENED EDGE SIDEWALK, REF. DETAIL 14-C4.1
 - 9 CONTRACTION JOINT, REF. DETAIL 11-C4.1
 - 10 EXPANSION JOINT, REF. DETAIL 11-C4.1
 - 11 DRAINAGE STRUCTURE TYPE A-1 INLET, REF. DETAIL 1-C4.2
 - 12 PIPE BOLLARD, REF. DETAIL 1-C4.5
 - 13 90° STANDARD PARKING SPACE, REF. DETAIL 1-C4.4
 - 14 90° VAN ACCESSIBLE PARKING SPACE, REF. DETAIL 2-C4.4
 - 15 PAINTED ISLAND, REF. DETAIL 4-C4.4
 - 16 PAINTED CROSS WALK, REF. DETAIL 9-C4.4
 - 17 STOP BAR, REF. DETAIL 5-C4.4
 - 18 STOP SIGN, REF. DETAIL 7-C4.4
 - 19 PROJECT LIMIT LINE
 - 20 DECORATIVE CONCRETE BOLLARD, REF. DETAIL 3-C4.5
 - 21 RIP-RAP SWALE, REF. DETAIL 4-C4.5
 - 22 TUBULAR BARRIER GATE, REF. DETAIL 10-C4.4
 - 23 PAVEMENT BUTT JOINT, REF. DETAIL 15-C4.1
 - 24 BITUMINOUS RESURFACING, REF. DETAIL 16-C4.1
 - 25 CONCRETE CURB AND GUTTER, TYPE B-6.18, REF. DETAIL 7-C4.1
 - 26 TRENCH DRAIN, REF. DETAIL 7-C4.2
 - 27 5' GUTTER TRANSITION, REF. DETAIL 13-C4.1
 - 28 4' CURB OPENING, REF. DETAIL 12-C4.1
 - 29 LANDSCAPED INFILTRATION BASIN, REF. DETAIL 6-C4.5
 - 30 SITE LIGHTING - DESIGN TO BE COMPLETED BY CONTRACTOR

SYMBOL LEGEND

- THICKENED EDGE SIDEWALK
- ▨ HEAVY DUTY PAVEMENT
- ▨ CONCRETE LOADING AREA PAVEMENT
- ▨ BITUMINOUS OVER LAY
- * MEASURED TO BACK-OF-CURB

SYM. D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group Hochens Jenkins/Olsen/Swable 300 Park Boulevard, Suite 250 Itasca, Illinois 60143-5146		DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS	
NEW COMMISSARY FACILITY SITE LAYOUT PLAN			
MAXWELL A.F.B. - GUNTER ANNEX, AL			
DESIGNED BY: GPO	DATE: 01 MAR 11		
DRAWN BY: GRR	PROJECT NO. DE00003		
REVIEWED BY: EJS	SEQUENCE NO. 1		
SUBMITTED BY:	SOL. NO.	DATE: 01 MAR 11	
ENGINEER:	DRAWING NUMBER	SHEET NO. OF	C3.1

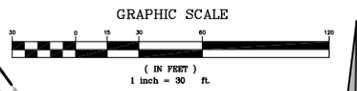
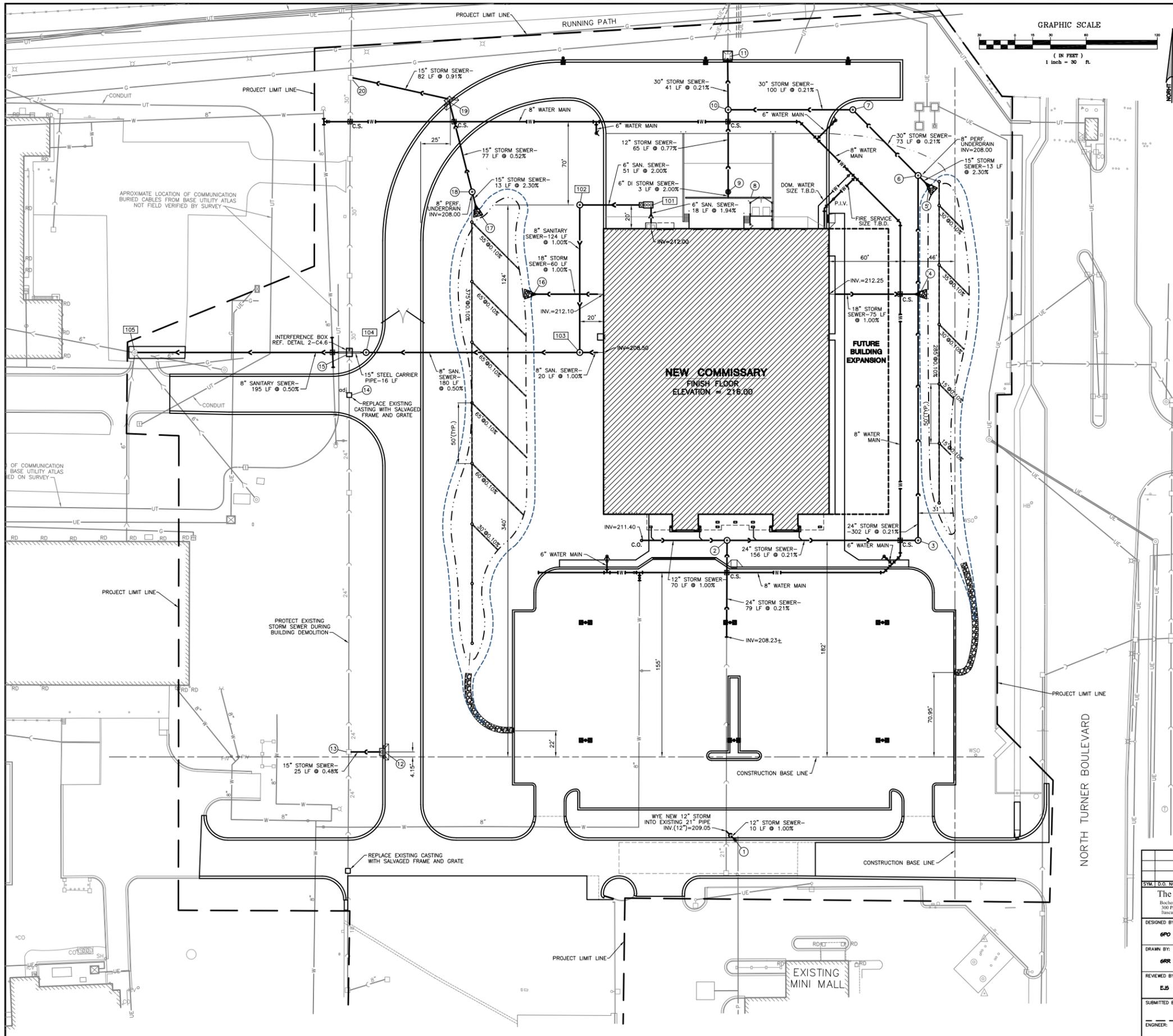


NOTE:
ADD 200 FEET TO ALL NEW SPOT ELEVATIONS

SYMBOL LEGEND	
	EXISTING DECIDUOUS TREE
	EXISTING CONIFER TREE
	EXISTING DRAINAGE STRUCTURE
	EXISTING MANHOLE
	EXISTING STORM SEWER
	EXISTING MINOR (1') CONTOUR LINE
	EXISTING MAJOR (5') CONTOUR LINE
	NEW 4' DIA. CATCH BASIN, REF. DETAIL 4-C4.2
	NEW 2' DIA. CATCH BASIN, REF. DETAIL 8-C4.2
	NEW MANHOLE, REF. DETAIL 5-C4.2
	NEW TRENCH DRAIN, REF. DETAIL 4-C4.2
	NEW INTERFERENCE BOX, REF. DETAIL 7-C4.3
	NEW CLEAN-OUT, REF. DETAIL 3-C4.2
	CURB DRAINAGE OUTLET, REF. DETAIL 4-C4.5
15.50	NEW SPOT ELEVATION
14.50	NEW TOP OF CURB ELEVATION
14.00	NEW EDGE OF PAVEMENT ELEVATION
	NEW DRAINAGE DIVIDE
(10.20)	EXISTING SPOT ELEVATION
TW	TOP OF WALL ELEVATION
	NEW STORM SEWER
	NEW MINOR (1') CONTOUR LINE
	NEW MAJOR (5') CONTOUR LINE
	NEW SWALE LINE
	ADJUST RIM ELEVATION OF EXISTING DRAINAGE STRUCTURE
	CONCRETE FLARED END SECTION WITH RIP-RAP REF. DETAIL 7-C4.5
	4" PVC ACCESS PORT WITH REMOVABLE CAP, REF. DETAIL 6-C4.5
	8" PERFORATED PVC UNDERDRAIN IN GRAVEL TRENCH REF. DETAIL 6-C4.5
	RIP-RAP SWALE, REF. DETAIL 4-C4.5

SYM. D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group Hochstein/Jenkins/Olsen/Swoboda 390 Park Boulevard, Suite 250 Itasca, Illinois 60143-5146		DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS	
NEW COMMISSARY FACILITY SITE DRAINAGE AND GRADING PLAN			
MAXWELL A.F.B. - GUNTER ANNEX, AL.			
DESIGNED BY:	6FO	SUBMITTED BY:	EJS
DRAWN BY:	6RR	PROJECT NO.:	DEMP03
REVIEWED BY:		DATE:	01 MAR 11
ENGINEER:		SEQUENCE NO.:	C5.1
		DRAWING NUMBER:	
		SHEET NO. OF:	



SYMBOL LEGEND

- EXISTING CATCH BASIN
- ⊙ EXISTING MANHOLE
- ⊕ EXISTING FIRE HYDRANT
- ⊖ EXISTING VALVE BOX
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- EXISTING PETROLEUM LINE
- NEW 4' DIA. CATCH BASIN, REF. DETAIL 4-C4.2
- NEW 2' DIA. CATCH BASIN, REF. DETAIL 8-C4.2
- NEW MANHOLE, REF. DETAIL 5-C4.2
- NEW CLEAN-OUT, REF. DETAIL 3-C4.2
- ◄ NEW FLARED END SECTION, REF. DETAIL 5-C4.5
- ◄ NEW FIRE HYDRANT, REF. DETAIL 1-C4.3
- NEW VALVE IN VALVE BOX, REF. DETAIL 2-C4.3
- P.I.V. ● NEW POST INDICATOR VALVE, REF. DETAIL 3-C4.3
- NEW TYPE A-1 DRAINAGE STRUCTURE, REF. DETAIL 1-C4.2
- NEW STORM SEWER
- NEW SANITARY SEWER
- NEW WATER MAIN
- NEW TRENCH DRAIN, REF. DETAIL 7-C4.2
- NEW GREASE TRAP
- C.S. ● NEW 6" CONCRETE COVER SLAB, REF. DETAIL 1-C4.6
- NEW SWALE LINE
- odj □ ADJUST EXISTING DRAINAGE STRUCTURE RIM ELEVATION
- ◄ NEW RIP-RAP OUTLET, REF. DETAIL 7-C4.5
- 4" PVC ACCESS PORT WITH REMOVABLE CAP, REF. DETAIL 6-C4.5
- 8" PERFORATED PVC UNDERDRAIN IN GRAVEL TRENCH, REF. DETAIL 6-C4.5
- NEW SITE LIGHTING FIXTURE

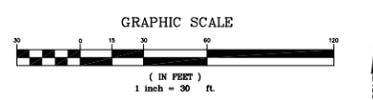
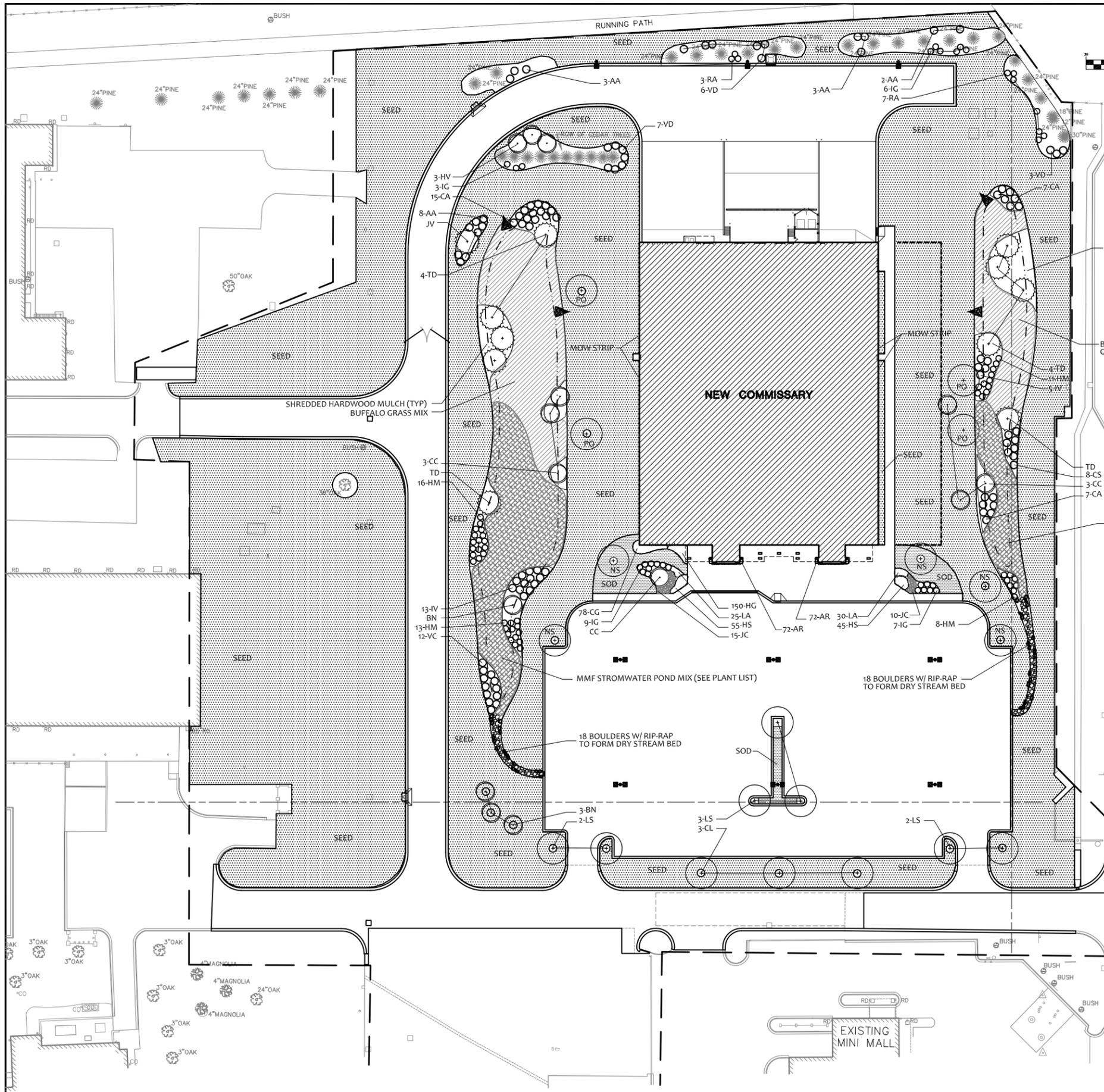
DRAINAGE STRUCTURES

1 2' DIA. CATCH BASIN RIM=212.60 INV.=209.15(12"NW)	11 EXISTING DRAINAGE STRUCTURE RIM=211.45 INV.=206.55(EXISTING 30"S&N)
2 4' DIA. MANHOLE RIM=215.75 INV.=210.00(12"W) INV.=208.00(24"S) INV.=207.95(24"E)	12 TYPE 1 DRAINAGE STRUCTURE CURB OPENING=210.75 INV.=208.09(15"W)
3 4' DIA. MANHOLE RIM=213.70 INV.=207.63(24"W) INV.=207.63(24"N)	13 EXISTING DRAINAGE STRUCTURE RIM=210.97 INV.=207.97(15"E) INV.=207.27(EXISTING 24"S&N)
4 18" CONCRETE FLARED END SECTION RIM=211.50	14 ADJUST EXISTING DRAINAGE STRUCTURE NEW RIM=211.60 EXISTING RIM=210.20 INV.=206.30(EXISTING 24"S) INV.=206.30(EXISTING 30"N)
5 15" CONCRETE FLARED END SECTION RIM=211.50	15 CONCRETE INTERFERENCE BOX RIM=211.95 INV.=207.07(8" SANITARY SEWER) INV.=206.28(EXISTING 30"S&N)
6 5' DIA. MANHOLE WITH FLAT SLAB TOP RIM=214.15 INV.=211.20(15"SE) INV.=207.00(24"S) INV.=207.00(30"NW)	16 18" CONCRETE FLARED END SECTION RIM=211.50
7 5' DIA. MANHOLE WITH FLAT SLAB TOP RIM=213.25 INV.=206.85(30"SE&W)	17 18" REINFORCED CONCRETE FLARED END SECTION RIM=211.50
8 TRENCH DRAIN RIM=211.50 INV.=209.25(6"N)	18 4' DIA. MANHOLE WITH FLAT SLAB TOP RIM=214.15 INV.=211.20(15"S) INV.=207.70(15"N)
9 4' DIA. CATCH BASIN WITH FLAT SLAB TOP RIM=211.60 INV.=209.19(6"S) INV.=208.60(12"N)	19 TYPE 1 DRAINAGE STRUCTURE CURB OPENING=210.20 INV.=207.30(15"S) INV.=207.20(15"W)
10 5' DIA. MANHOLE WITH FLAT SLAB TOP RIM=212.20 INV.=208.10(12"S) INV.=206.64(30"E&N)	20 EXISTING DRAINAGE STRUCTURE RIM=210.11 INV.=206.45(NEW 12"E) INV.=205.61(EXISTING 30"S&N)

SANITARY STRUCTURES

101 1000 GALLON GREASE TRAP RIM=215.45 INLET=211.65(6"E) OUTLET=211.40(6"W)	104 4' DIA. MANHOLE RIM=212.75 INV.=207.22(8"E) INV.=207.12(8"W)
102 4' DIA. MANHOLE RIM=214.65 INV.=210.43(6"E) INV.=210.00(8"S)	105 EXISTING MANHOLE RIM=210.07 INV.=206.17(NEW 8"E) INV.=206.07(EXISTING OUTLET)
103 4' DIA. MANHOLE RIM=214.85 INV.=208.30(8"E) INV.=207.80(8"N) INV.=208.10(8"W)	

SYMBOL	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION
<p>The Jenkins Group Bochenek/Jenkins/Olsen/Sosabie 390 Park Boulevard, Suite 250 Itasca, Illinois 60143-5146</p> <p>DEFENSE COMMISSARY AGENCY DIRECTORATE OF PERFORMANCE & POLICY FORT LEE, VIRGINIA LACKLAND AFB, TEXAS</p>				
DESIGNED BY:	6FO			
DRAWN BY:	6RR			
REVIEWED BY:	EJS			
SUBMITTED BY:				
ENGINEER:				
<p align="center">NEW COMMISSARY FACILITY</p> <p align="center">SITE UTILITY PLAN</p> <p align="center">MAXWELL A.F.B. - GUNTER ANNEX, AL</p>		SOL. NO.	DATE:	01 MAR 11
		PROJECT NO. DEMP03	SEQUENCE NO.	
DRAWING NUMBER	SHEET NO. OF	C61		



PLANT LEGEND

SYMBOL	COMMON NAME
SHADE TREES	
CL	Sugarberry
LS	Sweetgum
NS	Blackgum
PO	American Sycamore
ORNAMENTAL TREES	
BN	River Birch
CC	Ironwood
HV	Common Witchhazel
CONIFER TREES	
JV	Eastern Red Cedar
TD	Bald Cypress
SHRUBS	
AA	Red Chokeberry
CA	Silky Dogwood
CS	Coastal sweetpepperbush
HM	Crimsoneyed rosemallow
IG	Inkberry
IV	Virginia sweetspire
JC	Kallay Juniper
RA	Smooth Azalea
VC	Highbush Blueberry
VD	Arrowwood Viburnum
PERENNIALS, ORNAMENTAL GRASSES AND GROUNDCOVERS	
AR	Mahogany Ajuga
CG	Early Sunshine Coreopsis
HG	Georgia Peach Heuchera
HS	Stella D'Oro Daylily
LA	Shasta Daisy

SEE L1.2 FOR QUANTITIES AND ADDITIONAL INFORMATION

SYMBOL LEGEND

	CONCRETE FLARED END SECTION WITH RIP-RAP
	LAWN SEED AREA
	LAWN SOD AREA
	STORMWATER POND AREA
	BUFFALO GRASS MIXTURE
	24" PINE EXISTING PINE TREE WITH TRUNK DIA.
	36" OAK EXISTING DECIDUOUS TREE WITH TRUNK DIA.

SYM.	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

The Jenkins Group
 Hochens Jenkins/Olsen/Snooble
 300 Park Boulevard, Suite 250
 Itasca, Illinois 60143-5146

DEFENSE COMMISSARY AGENCY
 DIRECTORATE OF PERFORMANCE & POLICY
 FORT LEE, VIRGINIA
 LACKLAND AFB, TEXAS

DESIGNED BY: KTK
DRAWN BY: GRR
REVIEWED BY: EJS
SUBMITTED BY:

NEW COMMISSARY FACILITY
SITE LANDSCAPE PLAN
 MAXWELL A.F.B. - GUNTER ANNEX, AL

SOL. NO. DATE: 01 MAR 11
 PROJECT NO. DECOMP SHEET NO. OF L11
 DRAWING NUMBER SHEET NO. OF

APPENDIX C: NOR AND ACKNOWLEDGEMENT LETTER FROM ADEM

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
FIELD OPERATIONS DIVISION NPDES STORMWATER PROGRAM**

NOTICE OF REGISTRATION (NOR)

THIS FORM IS TO BE USED FOR ADEM ADMINISTRATIVE CODE CHAPTER 335-6-12 - NPDES CONSTRUCTION, NONCOAL/NONMETALLIC MINING AND DRY PROCESSING LESS THAN FIVE ACRES, OTHER LAND DISTURBANCE ACTIVITIES, AND AREAS ASSOCIATED WITH THESE ACTIVITIES

PLEASE READ THE INSTRUCTIONS BEGINNING ON PAGE 3 OF THIS FORM CAREFULLY BEFORE COMPLETING. COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL DELAY ACCEPTANCE OF REGISTRATION. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. ATTACH CBMPP AND OTHER INFORMATION AS NEEDED. PLEASE TYPE OR PRINT LEGIBLY IN INK.

I. REGISTRANT INFORMATION Registration: Modification: Transfer: Re-Registration: AL. _____

Registrant Name			Facility/Site Name			# of Years Coverage Requested:
Responsible Owner/Operator or Official, and Title				Site Contact and Title		
Mailing Address of Registrant				Site Street Address or Location Description		
City		State	Zip	City		State Zip
Business Phone Number		Site Phone Number		Fax Number		
		Ext.			Ext.	
Responsible Official (RO) Street/Physical Address			RO Phone Number		Email Address	
					Ext.	
(If applicable) Registered Agent Name, Address, & Phone Number						
Ext.						

II. LEGAL STRUCTURE OF REGISTRANT

Corporation Individual Single Proprietorship Partnership LLC LLP Government Agency Other _____

Yes No If not an Individual or Single Proprietorship, registrant is properly registered and in good standing with the Alabama Secretary of State's office. If "No", please explain:

III. ACTIVITY DESCRIPTION & INFORMATION

County(s) _____ Township(s), Range(s), Section(s) _____

Directions To Site _____

Yes	No	Is/will this facility:	Yes	No
(a) <input type="checkbox"/>	<input type="checkbox"/>	an existing site which currently discharges to State waters?	(b) <input type="checkbox"/>	<input type="checkbox"/>
(c) <input type="checkbox"/>	<input type="checkbox"/>	a proposed site which will result in a discharge to State waters?	(d) <input type="checkbox"/>	<input type="checkbox"/>
				discharge to waters of or be located in the Coastal Zone?
				be located on Indian/ historically significant lands?

IV. PROPOSED SCHEDULE - Used to determine potential registration duration & applicable fee amount, considering responses to Item VIII.

Anticipated Activity schedule: Commencement date: _____ Completion date: _____

Area of the Registered site: Total site area in acres: _____ Total disturbed area in acres: _____

V. VIOLATION HISTORY

Identify every Notice of Violation (NOV), Administrative Order, Directive, or Litigation filed by ADEM or EPA during the three year (36 months) period preceding the date on which this form is signed issued to the operator, owner, registrant, partner, parent corporation, subsidiary, LLP, or LLC Member. Indicate the date of issuance, briefly describe alleged violations, list actions (if any) to abate alleged violations, and indicate date of final resolution:

VI. MAP SUBMITTAL

Yes No A 7.5 minute series USGS topographic map(s) or equivalent map(s) is attached according to the instructions beginning on Page 3. **If "No", explain:**

VII. PROPOSED ACTIVITY(S) TO BE CONDUCTED

If Non-Coal, Non-Metallic Mining, Recovery, or Construction Material Management Site: Dirt-Chert Sand-Gravel Shale-Clay
 Crushed-Dimension Stone Other _____ Other _____ Other _____
 Primary SIC Code _____ Brief Description Construction, Noncoal Mining, or Materials Management Activity:

VIII. RECEIVING WATERS

List name of receiving water(s), latitude & longitude (decimal or deg,min,sec) of location(s) that run-off enters the receiving water, total number of disturbed acres, the total number of drainage acres which will drain through each treatment system or BMP, and the waterbody classification. **If receiving water is designated as ONRW and/or Tier I waterbody, attach/submit copy of CBMPP.**

Receiving Water	Latitude	Longitude	Disturbed Acres	Drainage Acres	Waterbody Classification	ONRW Y or N	TIER I Y or N

IX. MODIFICATION & RE-REGISTRATION - CONTINUING EDUCATION & INSPECTION INFORMATION

Yes No Required inspections/monitoring by QCP/QCI have been performed and records retained. **If "No", explain:**

 List name(s) and designation/certification #s of QCPs/QCIs that performed required inspections/monitoring:

X. QUALIFIED CREDENTIALLED PROFESSIONAL (QCP) CERTIFICATION

"I certify under penalty of law that a comprehensive Construction Best Management Practices Plan (CBMPP) for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this site/activity, and associated regulated areas/activities, utilizing effective BMPs from the Alabama Handbook For Erosion Control, Sediment Control, And Stormwater Management On Construction Sites And Urban Areas, Alabama Soil and Water Conservation Committee, as amended (ASWCC). If the CBMPP is properly implemented and maintained by the registrant, discharges of pollutants in stormwater runoff can reasonably be expected to be effectively minimized to the maximum extent practicable according to the requirements of ADEM Administrative Code Chapter 335-6-12. The CBMPP describes the pollution abatement/prevention management and effective structural & nonstructural BMPs that must be fully implemented and regularly maintained as needed at the registered site in accordance with sound sediment and erosion practices to ensure the protection of water quality."

QCP Designation/Description: _____
 Address _____ Registration/Certification _____
 Name and Title (type or print) _____ Phone Number _____ Ext. _____
 Signature _____ Date Signed _____

XI. OPERATOR - RESPONSIBLE OFFICIAL SIGNATURE

Pursuant to ADEM Administrative Code Rule 335-6-6-.09, this NOR must be signed by a Responsible Official of the registrant who is the operator, owner, the sole proprietor of a sole proprietorship, a general/controller member or partner, a ranking elected official or other duly authorized representative for a unit of government; or an executive officer of at least the level of vice-president for a corporation, having overall responsibility and decision making for the site/activity. "I certify under penalty of law that this form, the CBMPP, and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the qualified credentialed professional (QCP) and other person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, correct, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations. I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form. I further certify that the proposed discharges described in this registration have been evaluated for the presence of any non-construction and/or coal/mineral mining stormwater, or process wastewaters have been fully identified."

Name (type or print) _____ Official Title _____
 Signature _____ Date Signed _____

APPENDIX D: INSPECTION REPORT

APPENDIX D: Stormwater Construction Site Inspection Report

General Information			
Project Name	New Commissary Facility, Maxwell AFB – Gunter Annex, AL		
NPDES Tracking No.		Location	
Date of Inspection		Start/End Time	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			
Inspector's Qualifications			
Describe present phase of construction			
Type of Inspection:			
<input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, provide:			
Storm Start Date & Time:	Storm Duration (hrs):	Approximate Amount of Precipitation (in):	
Weather at time of this inspection?			
<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds			
<input type="checkbox"/> Other: _____ Temperature: _____			
Have any discharges occurred since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, describe:			
Are there any discharges at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, describe:			

Site-specific BMPs

- *Number the structural and non-structural BMPs identified in your CBMPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
13		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
14		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
15		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
16		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
17		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
18		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
19		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
20		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Are all slopes and disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	Is trash/litter from work areas collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
10	Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12	(Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Non-Compliance

Describe any incidents of non-compliance not described above:

CERTIFICATION STATEMENT

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Print name and title: _____

Signature: _____ **Date:** _____

APPENDIX E: HYDROLOGY WORKSHEET AND HYDROGRAPH

CBMPP Contact: Gary P. Overbay, P.E., Civiltech Engineering, Inc.

Outfall No.: 1

CHANGE IN RUNOFF VOLUME FOR 2-YR, 24-HR STORM EVENT WORKSHEET

Project Name New Commissary Facility, Gunter Annex

Receiving Stream Drainage Area(s): (Unknown)

Receiving Stream Name: Three Mile Branch Creek

2-Year, 24-Hour Rainfall: 4.5 inches

Total Site Area: 11.6 acres

Total Outfall Drainage Area: 11.6 acres

Disturbed Area: 10.5 acres

Total Outfall Disturbed Area: 10.5 acres

Pre-construction Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	la (0.2*S)	Q Runoff ¹ (in)	Runoff Volume ² (ft ³)
Existing Pavement	-	304,100	7.0	98	0.2	0.041	4.264	1,297,000
Existing Roof	-	39,300	0.9	98	0.2	0.041	4.264	168,000
Existing Open Space	B	161,600	3.7	61	6.4	1.279	1.079	174,000
TOTAL:		505,000	11.6					1,639,000

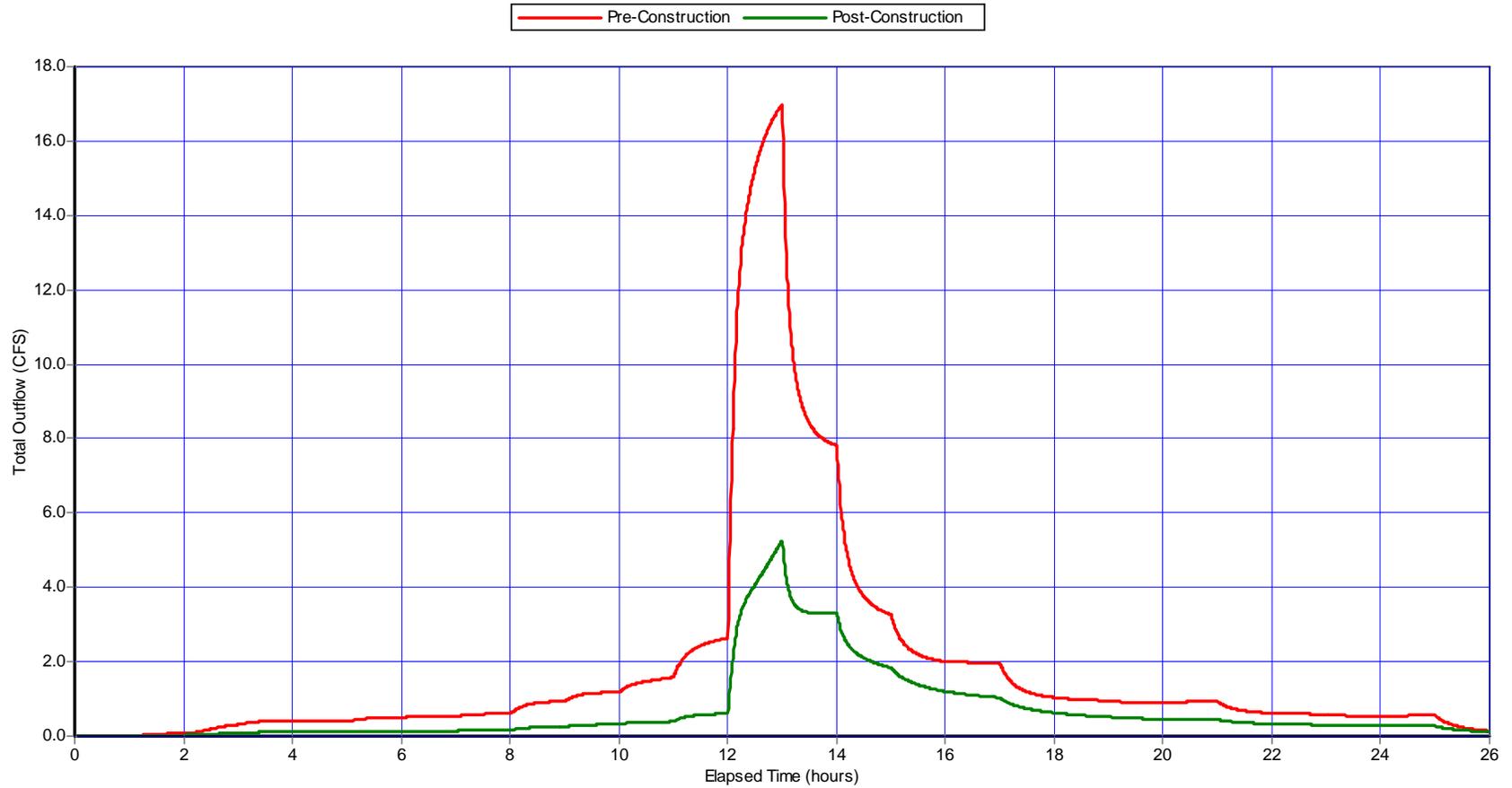
Post-construction Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	la (0.2*S)	Q Runoff ¹ (in)	Runoff Volume ² (ft ³)
Proposed Pavement	-	201,300	4.6	98	0.2	0.041	4.264	858,000
Proposed Roof	-	46,200	1.1	98	0.2	0.041	4.264	197,000
Proposed Open Space	B	257,500	5.9	61	6.4	1.279	1.079	278,000
TOTAL:		505,000	11.6					1,333,000

2-Year Volume Reduction (ft³): 306,000

New Commissary Facility, Maxwell A.F.B. - Gunter Annex

2-Year, 24-Hour Storm Hydrographs



APPENDIX F: CORRECTIVE ACTION LOG

APPENDIX G: LOG OF CHANGES AND UPDATES TO CBMPP

APPENDIX H: SUBCONTRACTOR CERTIFICATIONS/AGREEMENTS

APPENDIX H: Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION CONSTRUCTION BEST MANAGEMENT PRACTICES PLAN

Project Number: _____

Project Title: **New Commissary Facility, Maxwell AFB – Gunter Annex, AL**

Operator(s): _____

As a subcontractor, you are required to comply with the Construction Best Management Practices Plan (CBMPP) for any work that you perform on-site. Any person or group who violates any condition of the CBMPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the CBMPP. A copy of the CBMPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the CBMPP for the above designated project and agree to follow the BMPs and practices described in the CBMPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

Signature: _____

Title: _____

Date: _____

APPENDIX I: GRADING AND STABILIZATION ACTIVITIES LOG

APPENDIX J: CBMPP TRAINING LOG

APPENDIX J: CBMPP Training Log

Construction Best Management Practices Training Log

Project Name: New Commissary Facility, Maxwell AFB – Gunter Annex, AL

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

Stormwater Training Topic: *(check as appropriate)*

- | | |
|--|---|
| <input type="checkbox"/> Erosion Control BMPs | <input type="checkbox"/> Emergency Procedures |
| <input type="checkbox"/> Sediment Control BMPs | <input type="checkbox"/> Good Housekeeping BMPs |
| <input type="checkbox"/> Non-Stormwater BMPs | |

Specific Training objective: _____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

APPENDIX K: DELEGATION OF AUTHORITY FORM

APPENDIX K: Delegation of Authority Form

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the **New Commissary Facility, Maxwell AFB – Gunter Annex** construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix G, Subsection 11.A of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix G, Subsection 11.B (1-3).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

APPENDIX L: ENDANGERED SPECIES AND HISTORIC PRESERVATION DOCUMENTATION

FINDING OF NO SIGNIFICANT IMPACT

PROPOSED CONSTRUCTION OF A NEW FITNESS CENTER FACILITY AT MAXWELL AIR FORCE BASE, GUNTER ANNEX MONTGOMERY, ALABAMA

AGENCY: United States Air Force

PURPOSE: The 42d Air Base Wing (ABW) at Maxwell Air Force Base (MAFB), Montgomery, Alabama has proposed to construct a new fitness center at the Gunter Annex to rectify deficiencies at the existing fitness center.

PROPOSED ACTION: The proposed action is to construct a new fitness center of approximately 4,700 gross square meters in place of the existing fitness center (building 800) at MAFB-Gunter Annex. The existing fitness center is undersized, outdated, and has structural/mechanical deficiencies that contributed to a determination that the existing program requirements are 44% deficient when compared with the USAF Fitness Facilities Design Guide.

The proposed site of the new fitness center facility is about five hundred feet east of the existing fitness center, between the existing center and Turner Boulevard. A basketball court, racquetball court and four tennis courts currently occupy the proposed site and will have to be demolished to allow for construction of the new facility. The new fitness center facility will consist of a lobby, administrative areas, support areas, locker rooms, a gymnasium, group exercise areas, fitness equipment areas and racquetball courts. It will be a steel frame structure supported on a reinforced concrete foundation with masonry exterior walls, a standing seam metal roof, fire protection, HVAC, electrical and plumbing systems and connections to existing utilities.

Construction activities will include site work, construction of the building and construction of a parking lot. After the new fitness center facility is completed and occupied the existing fitness center, Building 800, will be demolished.

SUMMARY OF FINDINGS: The Environmental Assessment (Attachment) provides an analysis of the potential environmental impacts resulting from implementing the proposed action. Ten resource categories were evaluated to identify potential environmental consequences: air quality, water resources, land use, hazardous materials and wastes, utilities, cultural resources, noise, biological resources, geological resources and transportation. Evaluation of the proposed action indicates that the affected environment would not be significantly impacted by proceeding with the proposed construction projects.

Air Quality: There would be no long-term increase in mobile or stationary source emissions at the installation due to the proposed action. Short-term emission sources would include construction activities and fugitive dust from demolition and construction operations. Dust emissions produced during demolition and construction operations would be reduced by employing dust minimization practices. Implementation of the proposed action will not lead to an exceedance of de minimis thresholds and estimated criteria pollutant emissions will not violate National Ambient Air Quality Standards (NAAQS). Therefore, no significant impacts to air quality will occur as a result of implementation of the proposed action.

Water Resources: Construction and demolition activities will result in a temporary increase in total suspended particulate matter to nearby surface water. Because construction will require the disturbance of more than one acre, a Notice of Intent under the general Alabama storm water discharge permit will be filed with ADEM. Additionally, the contractor will be required to develop a storm water pollution prevention plan for the project (USAF, 2001). The incorporation of best management practices for sediment control during construction and demolition activities will minimize potential water quality issues during construction. Because there are no identified wetlands on MAFB-Gunter Annex no wetlands will be impacted by the proposed action. Therefore, no significant impacts to water resources will occur as a result of implementation of the proposed action.

Land Use: The proposed action complies with existing base land use guidelines. The proposed site is in an area that has been previously disturbed by base development; therefore little, if any natural habitat exists. Use of the site selected for the proposed action is in accordance with the adopted Comprehensive Plan for MAFB-Gunter Annex and all project components will be designed and sited to be compatible with existing base land use. The proposed action will be centrally located within the Community Commercial Services land use zones, thereby maintaining the functional relationship among community facilities. The site will be easily accessible to all family housing areas and within walking distance of the majority of the troop housing and community support areas. The site is also accessible to military personnel residing in the civilian community. Therefore, no significant impacts to land use will occur as a result of implementation of the proposed action.

Hazardous Materials and Wastes: The proposed action is not expected to have an impact on the management of hazardous materials at MAFB-Gunter Annex and the proposed new fitness center will not be considered a generator of hazardous materials or hazardous wastes. Construction activities associated with the proposed action would require the use of certain hazardous materials such as paints, welding gases and solvents. Quantities of products containing hazardous materials used during construction of the fitness center will be minimal and their use will be of short duration. The Contractor will be responsible for the proper management of hazardous materials and waste during the construction work, including asbestos and lead paint associated with demolition of the existing fitness center (building 800). IRP site ST-004 is located on or in the vicinity of the proposed

construction site. Review of documents describing the investigations completed for the ST-004 site indicate that the underground pipelines associated with the AVGAS distribution system may extend into the area of the proposed action. Although the pipes have been drained and filled with cement grout the possibility exists that contaminated soils and groundwater may be present in the vicinity of the pipelines. Plans should be developed in advance of construction to provide contingencies in the event that the pipelines or contaminated soil/groundwater are encountered. This should include studies to determine if petroleum contamination is present on the site of the proposed action and if so, an assessment of risks and development of mitigation strategies.

Utilities: The increase in utility usage associated with the proposed action is projected to be less than one half percent of MAFB-Gunter Annex 2001 usage. No daily limits are placed on MAFB-Gunter Annex consumption of potable water, electricity and natural gas and local utility companies have adequate capacity to accommodate the projected increases. Therefore, no significant impacts to utilities will occur as a result of implementation of the proposed action.

Cultural Resources: The proposed construction will take place in an area previously disturbed by urban development. No archeological sites or architectural resources are known to exist at, or in the vicinity of, the proposed action. In addition, the Alabama State Historic Preservation Office concurs that the proposed action would have little effect on any known cultural resources listed or eligible for the National Register of Historic Places. Therefore, no significant impacts to cultural resources will occur as a result of implementation of the proposed action.

Noise: Noise levels associated with operation of the new fitness center will be minimal and similar to those of the current fitness center. Noise levels within and adjacent to the project construction and demolition area will increase during the construction and demolition period. However, since construction and demolition activity will be limited to daytime hours and will occur for a defined period of time, long-term noise impacts are not expected. Therefore, no significant increase of noise will occur as a result of implementation of the proposed action.

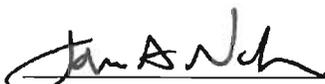
Biological Resources: The proposed action will occur in an area of MAFB-Gunter Annex that is improved and has been previously disturbed. There are no wetlands within the boundary of MAFB-Gunter Annex. Furthermore, according to the USFWS, there are no endangered, protected or threatened species occurring in, on, or near the proposed site. Therefore, no significant impacts to biological resources will occur as a result of implementation of the proposed action.

Geological Resources: The site of the proposed action has been disturbed by previous construction and has no unique geologic features or geologic hazards. Ground surface disturbance will occur during the course of construction however soil erosion and sedimentation from construction and demolition activities will be minor because sediment and erosion measures will be implemented. Therefore, no significant impacts to geological resources will occur as a result of implementation of the proposed action.

Transportation: Implementation of the proposed action will result in minor temporary increases in daily traffic volumes on MAFB-Gunter Annex and in the vicinity during construction. Because the new facility will be constructed very near to where the existing facility is located and will have the same general access routes traffic circulation will not be significantly impacted and may be improved because the new facility is being constructed in a more accessible area. Traffic associated with construction and operation of the new fitness center will constitute only a small portion of the existing regional and installation traffic volume. Therefore, no significant impacts to transportation will occur as a result of implementation of the proposed action.

Public Review and Interagency Coordination: The EA and FONSI were placed in the City of Montgomery Public Library and the AU Library for a 30-day public comment period. No comments received. Based on the provisions set forth in the Proposed Action, all activities were found to comply with the criteria or standards of environmental quality and coordinated with the appropriate Federal and State agencies.

FINDING OF NO SIGNIFICANT IMPACT: After review of the EA (Attachment) prepared in accordance with the requirements of the National Environmental Policy Act, Council on Environmental policy Act, Council of Environmental Quality regulations, and 32 Code of Federal Regulations Part 989, as amended (U.S. Air Force Environmental Impact Analysis Process), I have determined that the proposed action will not have a significant individual or cumulative impact on the quality of the human or natural environment and, therefore, an Environmental Impact Statement does not need to be prepared.



JOHN A. NEUBAUER
Colonel, USAF
Commander, 42d Air Base Wing

6 APRIL 04
Date