

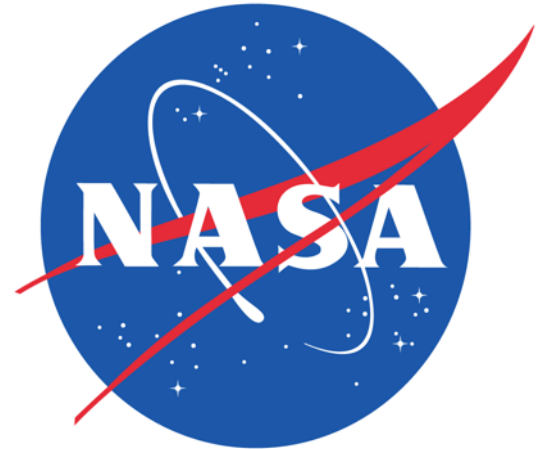
APPENDIX A

FIGURES

NASA – WHITE SANDS TEST FACILITY

EXECUTIVE SUMMARY

The Johnson Space Center WSTF Area Development Plan (ADP) provides analysis and planning for future growth capacity to accommodate current and future mission capabilities and needs that align with the JSC Planning Vision (below). Stakeholders attended a planning charrette from March 16-19, 2015 where they identified program requirements, analyzed the site, and developed a plan that provides flexibility, addresses needs, identifies attributes, and outlines a substantial development carrying capacity of the land. Plan identifies a total of 622,573sf total, including existing buildings that remain and newly proposed buildings.



Capacity Calculations

Existing Building Area: 429,332sf
Recommended Construction: 351,900sf
Demolished Building Area: 158,659sf
Total Build-out: 622,573sf

Total New Parking Required: 6,164 spaces

Existing Parking: 897 spaces
New Parking Spaces: 1,260 spaces
Demolished Parking: 964 spaces

Total Parking: 1,192 spaces
Required Parking: 1,788
Proposed On-Street Parking: B Street

WHITE SANDS TEST FACILITY PLANNING VISION GOAL:

We will safely advance WSTF's core capabilities, through **environmentally responsible methods** by designating **flexible hazardous test areas** and **efficient administration centers** with **appropriate buffer zones**.

From this planning vision, four planning goals emerged to guide the development process:

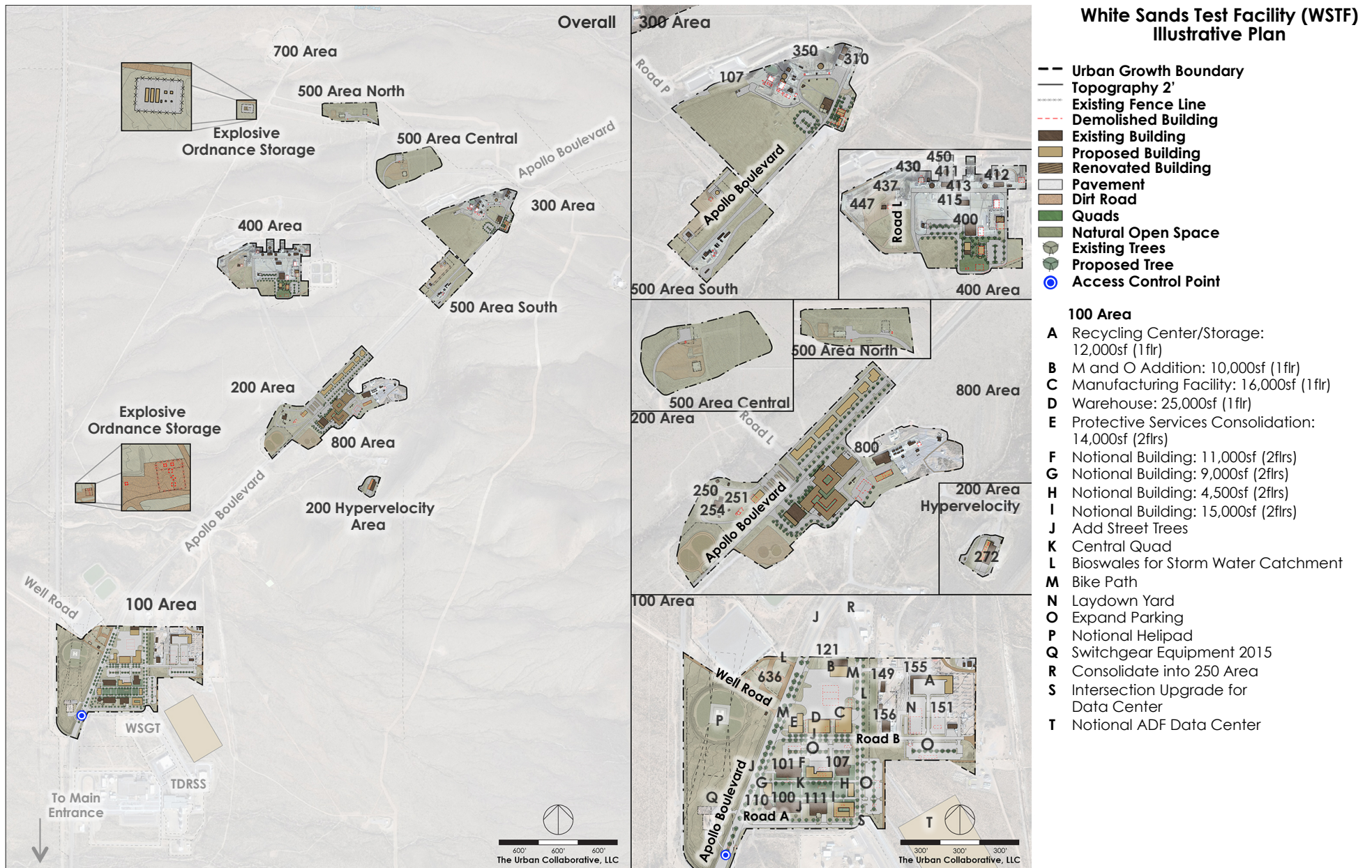
Goal 1: Environmentally Responsible Methods: WSTF will determine all potential environmental impacts during the planning phase of all projects / proposals; WSTF will communicate with the environmental department, identifying mitigation of all potential environmental impacts before projects/proposals start; strategies will employ all sustainable planning principles concerning energy, water, and other resource conservation.

Goal 2: Flexible Hazardous Test Areas: WSTF will maintain hazardous test areas that are able to be modified to meet various test requirements with minimal impact to test infrastructure at the lowest possible cost to our customers.

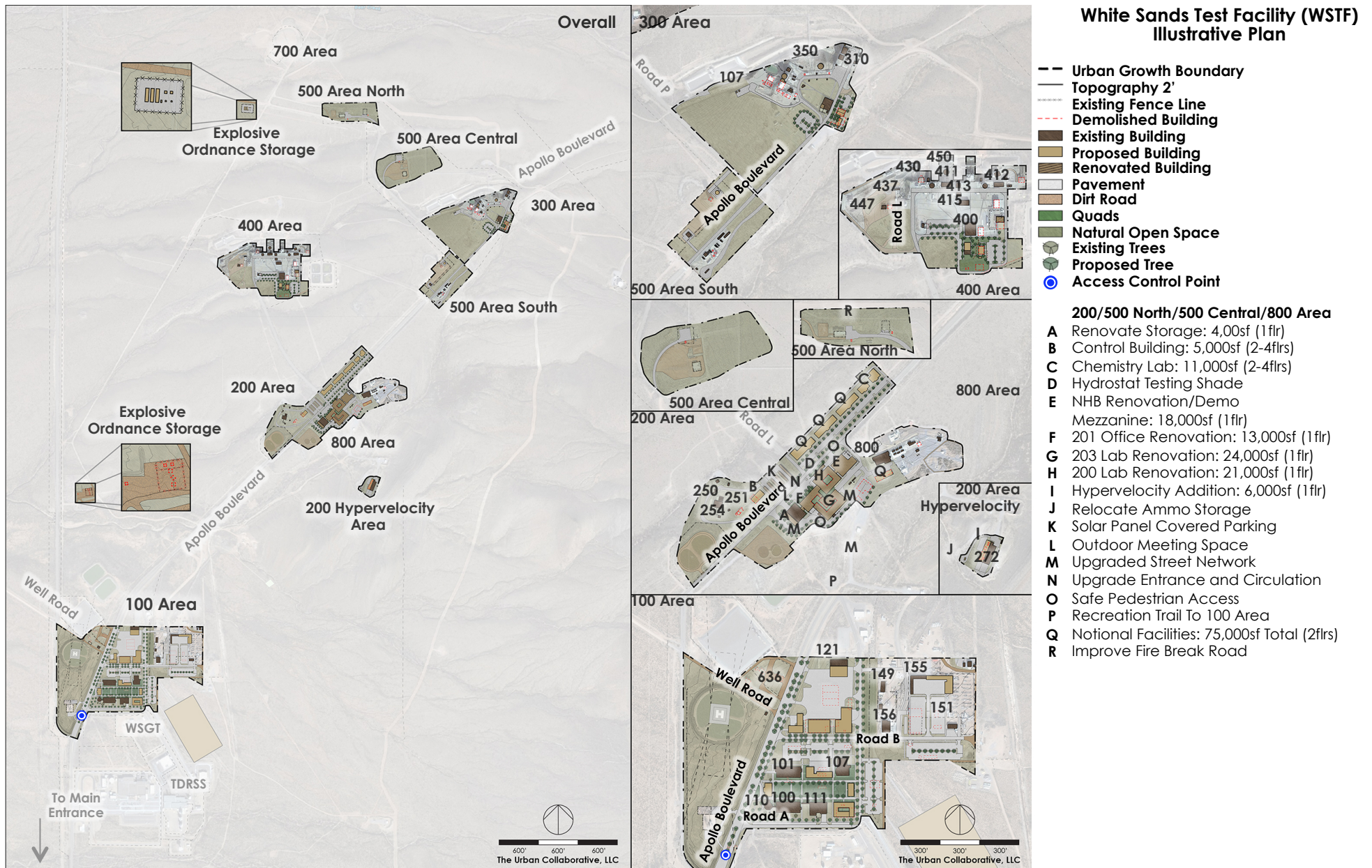
Goal 3: Efficient Administration Centers: WSTF will retain responsive administrative support for hazardous testing operations. These administration centers will maintain clear standardized instructions that facilitate test planning while remaining flexible enough to accommodate unique requirements. Furthermore, they will support technical knowledge, meeting regulatory guidelines, while limiting redundant or wasteful actions and focusing on the expertise of leadership in making risk-informed decisions.

Goal 4: Appropriate Buffer Zones: WSTF will establish internal and external buffer zones. Internal buffer zones will maintain separation between test areas and administrative areas. External buffer zones will prevent the encroachment of regional areas.

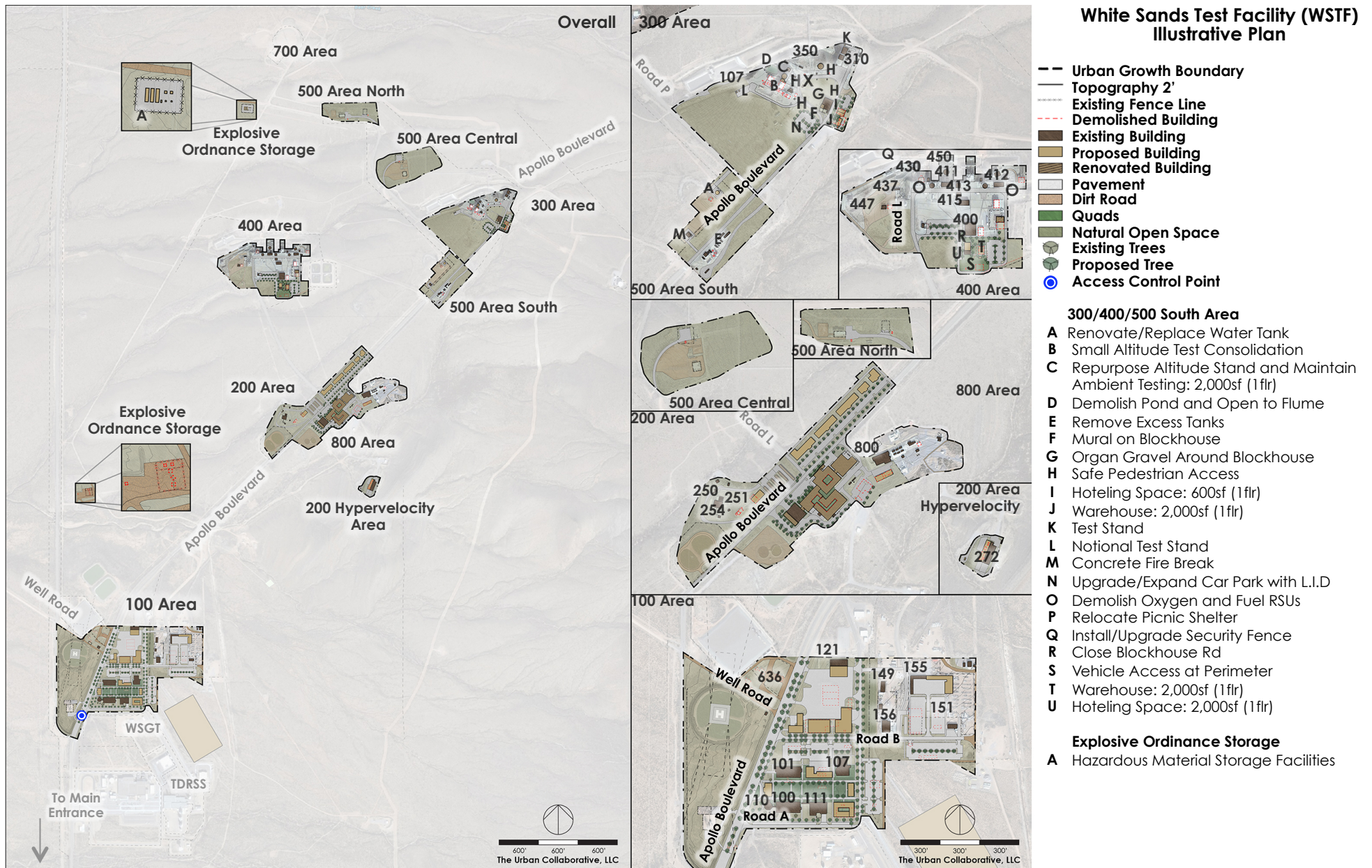
OVERALL ILLUSTRATIVE



OVERALL ILLUSTRATIVE PLAN, CONT.



OVERALL ILLUSTRATIVE PLAN, CONT.



100 AREA ILLUSTRATIVE PLAN

Area 100 Mission: To enable hazardous testing, the 100 area will provide mission operation, protective services, and logistical support services for hazardous testing areas.

White Sands Test Facility (WSTF) 100 Area

- Urban Growth Boundary
- Topography 2'
- Existing Fence Line
- Demolished Building
- Existing Building
- Proposed Building
- Renovated Building
- Pavement
- Dirt Road
- Quads
- Natural Open Space
- Existing Trees
- Proposed Tree
- 5-Minute Walk
- Access Control Point

- A Upgrade Apollo Blvd with Street Trees
- B Construct Central Quad
- C Construct Bioswales for Stormwater
- D Catchment
- E Upgrade Switchgear Equipment 20
- F Protective Services Consolidation: 8,000sf (2flrs)
- G Warehouse: 16,000sf (1flr)
- H Manufacturing Facility: 19,000sf (1flr)
- I Central Quad
- J Bike Path
- K Expand Parking
- L Intersection Upgrade for Data Center
- M Recycling Center/Storage: 12,000sf (1flr)
- N O and M Addition: 10,000sf (1flr)
- O Notional Building: 6,000sf (2flrs)
- P Notional Building: 11,000sf (2flrs)
- Q Notional Building: 4,000sf (2flrs)
- R Notional Building: 15,000sf (2flrs)
- S Laydown Yard
- T Expand Parking
- U Notional Helipad
- V Notional ADF Data Center

Demolished Buildings: 114, 118, 104, 104B, 108, 119, 112, 113, 115, 116A, 116B, 120A, 120B, 120C, 150, 152, 157, 162, 163, 253, 633, 634, 637, 638

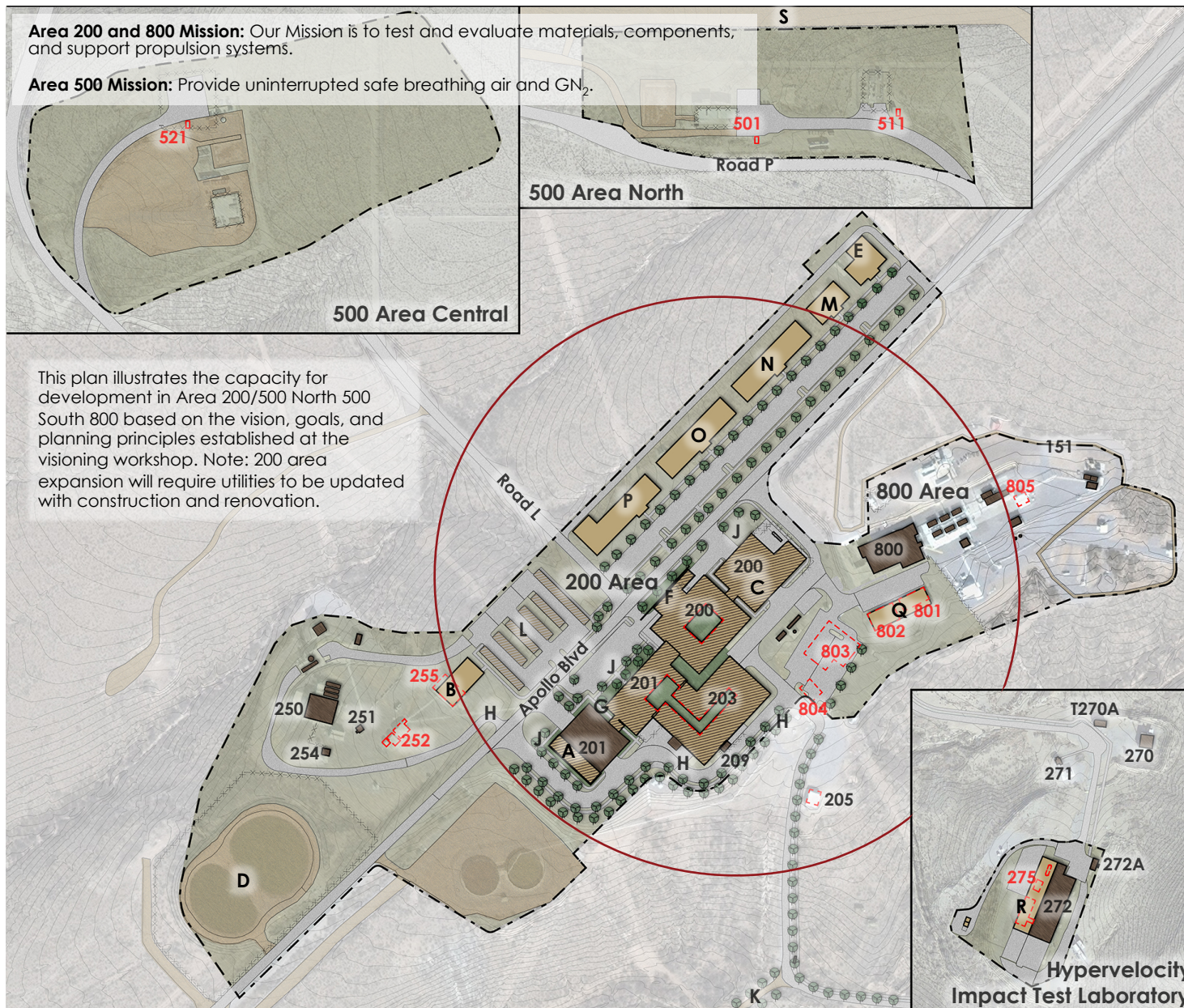
Total Demolished SF: 76,641sf

Note: Notional ADF Data Center is proposed by another Federal Agency and requires further site analysis.

This plan illustrates the capacity for development in Area 100 based on the vision, goals, and planning principles established at the visioning workshop.

Note: Solar panels removed from the 100 area will be replaced by the solar farm located off of Well Rd.

200/500/800 AREA ILLUSTRATIVE PLAN



White Sands Test Facility (WSTF) 200/500/800 Area

- Urban Growth Boundary
- Topography 2'
- - - Existing Fence Line
- - - Demolished Building
- Existing Building
- Proposed Building
- Renovated Building
- Pavement
- Dirt Road
- Quads
- Natural Open Space
- Proposed Tree
- 5-Minute Walk

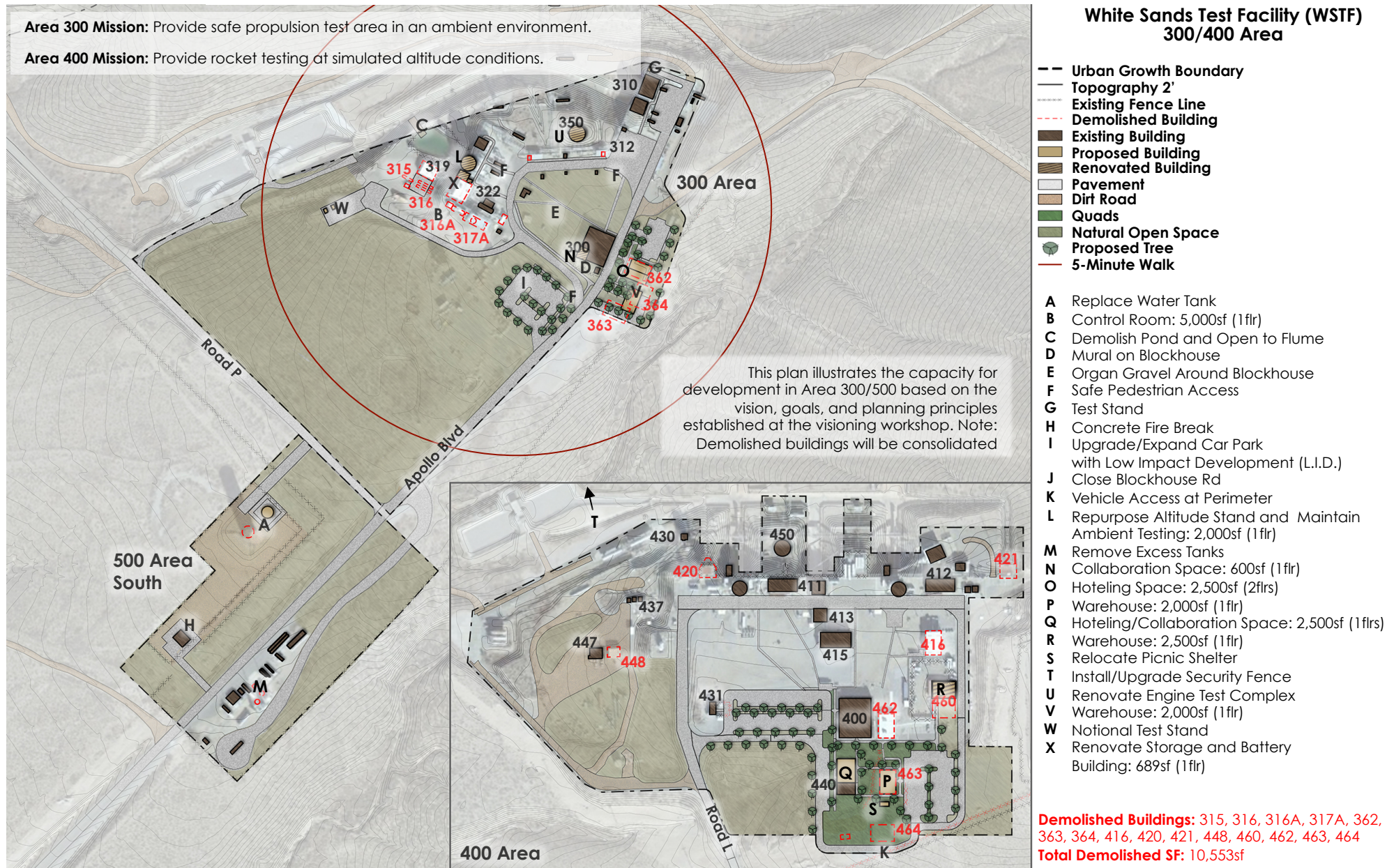
- A Renovate SHB Storage: 4,000sf (1flr)
- B Control Facility: 5,000sf (1flr)
- C NHB Renovation/Demo Mezzanine: 18,000 (1flr)
- D Remove Water Treatment Ponds
- E Chemistry Lab: 5,500sf (2flrs)
- F Hydrostat Testing Shade
- G Outdoor Meeting Space
- H Upgraded Street Network
- I Upgrade Entrance and Circulation
- J Safe Pedestrian Access
- K Recreation Trail To 100 Area
- L Solar Panel Covered Parking
- M Notional Facility: 5,000sf (2-4flrs)
- N Notional Facility: 10,000sf (2-4flrs)
- O Notional Facility: 10,000sf (2-4flrs)
- P Notional Facility: 11,000sf (2-4flrs)
- Q Notional Facility: 5,000sf (2-4flrs)
- R Hypervelocity Addition: 6,000sf (1flr)
- S Improve Fire Break Road

Renovated Buildings: 200, 201, 203

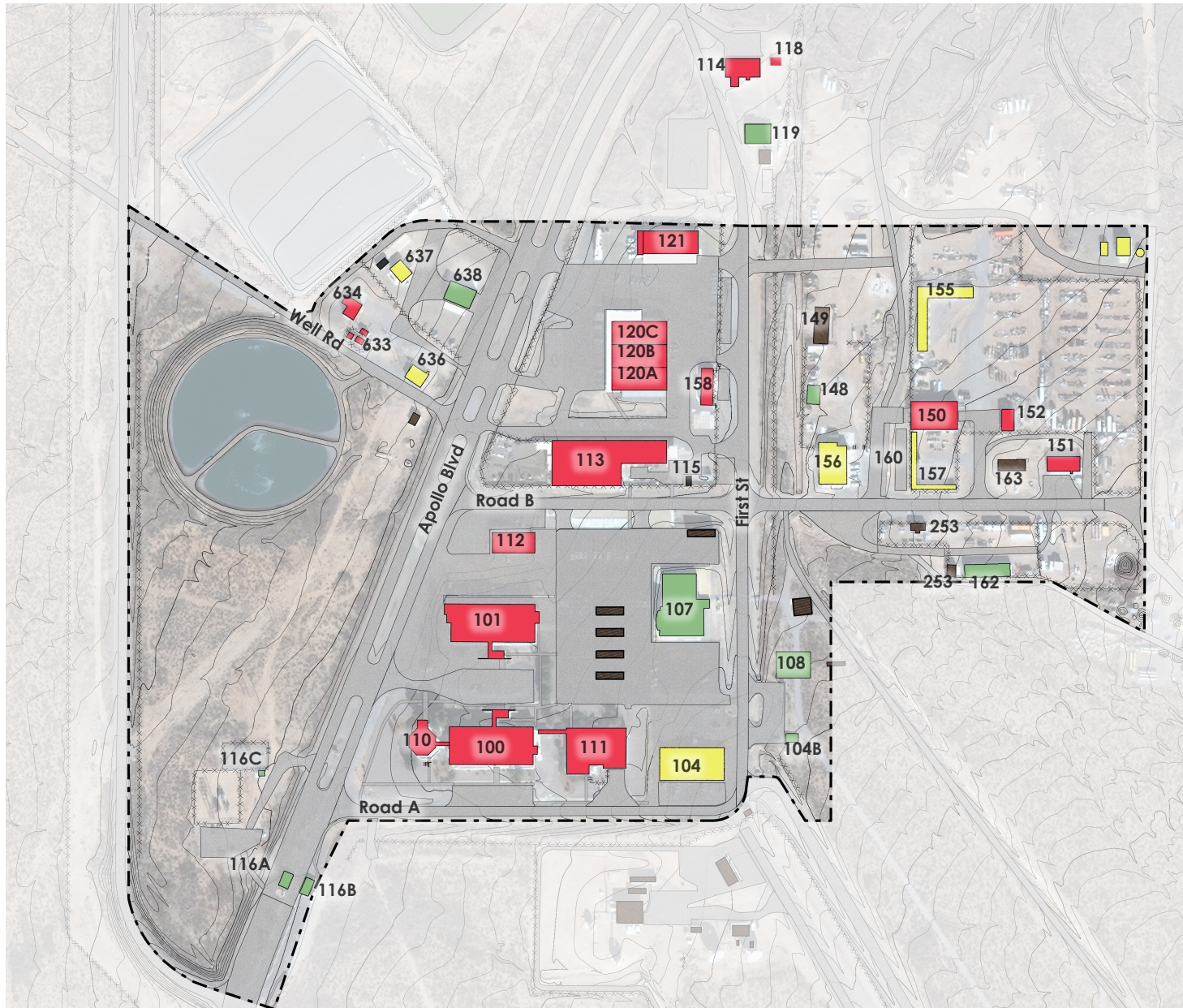
Demolished Buildings: 205, 252, 255, 275, 501, 511, 521, 801, 802, 803, 804, 805
Total Demolished SF: 5,275sf



300/400 AREA ILLUSTRATIVE PLAN



HISTORICAL AND BUILDING AGE ASSESSMENT

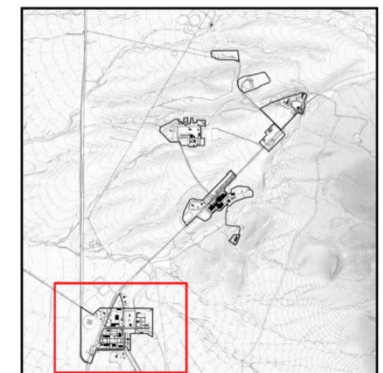


White Sands Test Facility (WSTF) 100 Area Building Age Assessment

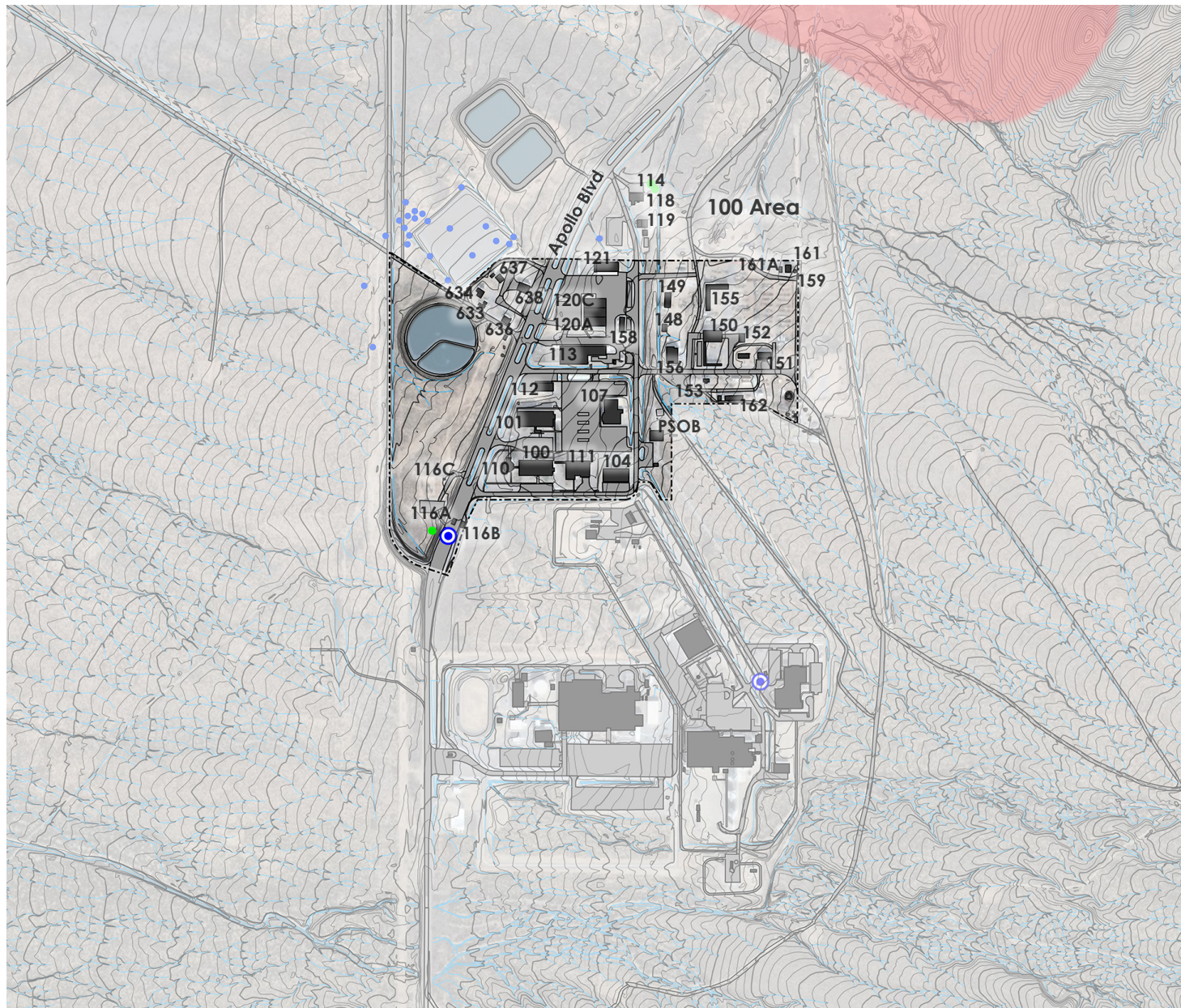
- Urban Growth Boundary
- Topography 2'
- - - Existing Fence Line
- Existing Buildings
- Existing Pavement
- Building 40 Years or Older
- Building 20-40 Years Old
- Building Less Than 20 Years Old

Existing buildings, roads and paving are important man-made constraints. Depending on their efficiency, quality, and historical significance, they should be maintained to maximize use of past investments. Built elements at the pedestrian scale, such as sidewalks, play an important role in shaping how personnel view and experience the area.

Note: Nothing has been identified in the 100 area as being historical.



ENVIRONMENTAL CONSTRAINTS



White Sands Test Facility (WSTF) 100 Area Environmental Constraints

- Urban Growth Boundary
- Topography 2'
- Existing Buildings
- Existing Pavement
- TCE Plume Area
- Arroyos
- Septic Tank
- Monitoring Wells
- Entry Gate

Unique environmental constraints occur due to WSTF's location. Primary environmental constraints in the 100 area include existing septic tanks and wells.

