E. Airport Plans

Master Plan

Nephi

Municipal Airport

E. Airport Plans

INTRODUCTION. The plan for the future development of Nephi Municipal Airport has evolved from an analysis of many considerations. Among these are: aviation demand forecasts; facility requirements; aircraft operational characteristics; environmental considerations; and, the general direction of future airport development, as expressed by Nephi City. The various landside/airside development options that were presented in the previous chapter provided the Study Advisory Committee with a variety of options for future facility expansion. Following a careful assessment of the potential impacts of each development option, the Airport Sponsor selected components of a recommended Conceptual Development Plan, which was presented at the conclusion of the previous chapter.

Because previous chapters have established and quantified the future development needs of the Airport, the various elements of the selected plan are categorically reviewed here in an outline and graphic format. A brief written description of the individual elements, represented in the set of *Airport Plans* for Nephi Municipal Airport, is accompanied by a graphic description presented in the form of the *Airport Layout Drawing, Airport Airspace Drawings, Airspace Approach Profiles, Inner Portion of the Approach Surface Drawings, Departure Surface Drawing, Terminal Area Plan, Land Use Drawing* and *Airport Property Map*.

It is recognized that future demand for facilities cannot be totally predicted at the Airport, particularly during the latter stages of the 20-year planning period. Therefore, particular emphasis is placed on the initial portion of the planning period, the first five years. Here, the projections are more definable and the magnitude of program accomplishment is more pronounced. Furthermore, carefully guided development within the initial years of the planning period is essential to the future expansion of this facility and the continued enhancement of aviation development.

Airport Layout Plan

The Airport Layout Plan (ALP), which illustrates both airside and landside facilities, is a graphic depiction of the existing and ultimate airport facilities that will be required for the Airport to properly accommodate the forecast future demand. In addition, the ALP provides detailed information on both airport and runway design criteria, which is necessary to define relationships with applicable standards. The following illustration, entitled *AIRPORT LAYOUT DRAWING*, and the following paragraphs describe the major components of the Airport's future Conceptual Development Plan.

Runway System

The development recommendations for the runway system are presented in the following text.

Runway 17/35.

- **Airport Reference Code (ARC) Dimensional Criteria:** This runway is currently designed in accordance with Airport Reference Code (ARC) C-II design criteria, as specified by the FAA. These are the standards that apply to the "Design Aircraft", (Cessna Citation X), in consideration of wingspan and approach speed, which currently utilize this runway or that are projected to utilize this runway in the future. As indicated in the *Aviation Activity Forecasts* chapter, approximately 705 operations conducted by a combination of ARC C-II and D-II aircraft are anticipated by the end of the planning period. Therefore, the ALP will continue to illustrate and maintain the existing/future ARC C-II criteria for this runway.

- **Dimensions:** Based on a desire to construct additional runway length for the future condition to accommodate the operation of a larger, more demanding aircraft, the ALP will protect for the future 900-foot extension of the runway for a total length of 7,200 feet. The existing 100-foot runway width will be maintained with the runway extension. The future runway length could accommodate approximately 75% of the fleet (i.e., aircraft weighing between 12,500 pounds and 60,000 pounds) at a 60% useful load, as specified by the FAA Airport Design program in consideration of the Airport's elevation, design temperature, and difference in runway elevation.

- **Pavement:** The runway's existing published gross weight bearing capacity (i.e., 21,000 pounds single wheel, and 30,000 pounds dual wheel main landing gear configuration will be maintained.

SURVEY MONUMENTS

ITEM	CONTROL STATION IDENTIFICATION NUMBER	DESCRIPTION
M1	U14 A DI1835	STAINLESS STEEL ROD IN SLEEVE
M2	U14 B DI2116	SURVEY DISK SET IN TOP OF CONCRETE MONUMENT
M3	U14 C DI2117	SURVEY DISK SET IN TOP OF CONCRETE MONUMENT

AIRPORT INFORMATION

	EXISTING	FUTURE
AIRPORT ELEVATION (AMSL) NAVD 88	5022.1'	*SAME*
AIRPORT REFERENCE POINT (ARP) NAD 83	N 39°44'11.70" W 111°52'12.20"	*N 39°44'07.20" W 111°52'12.14"*
MEAN MAX. TEMPERATURE (HOTTEST MONTH)	93°F	*SAME*
AIRPORT REFERENCE CODE	C-II	*SAME*
TAXIWAY LIGHTING	MITL	*SAME*
DESIGN AIRCRAFT	CESSNA CITATION X	*SAME*

FAA APPROVAL

CONDITIONALLY APPROVED

Subject to letter dated: _____

FEDERAL AVIATION ADMINISTRATION
DENVER AIRPORTS DISTRICT OFFICE

Date: _____

CASE NO. 2011-ANM-292-NRA

SPONSOR APPROVAL

SPONSOR SIGNATURE _____ DATE_____

EXISTING BUILDINGS

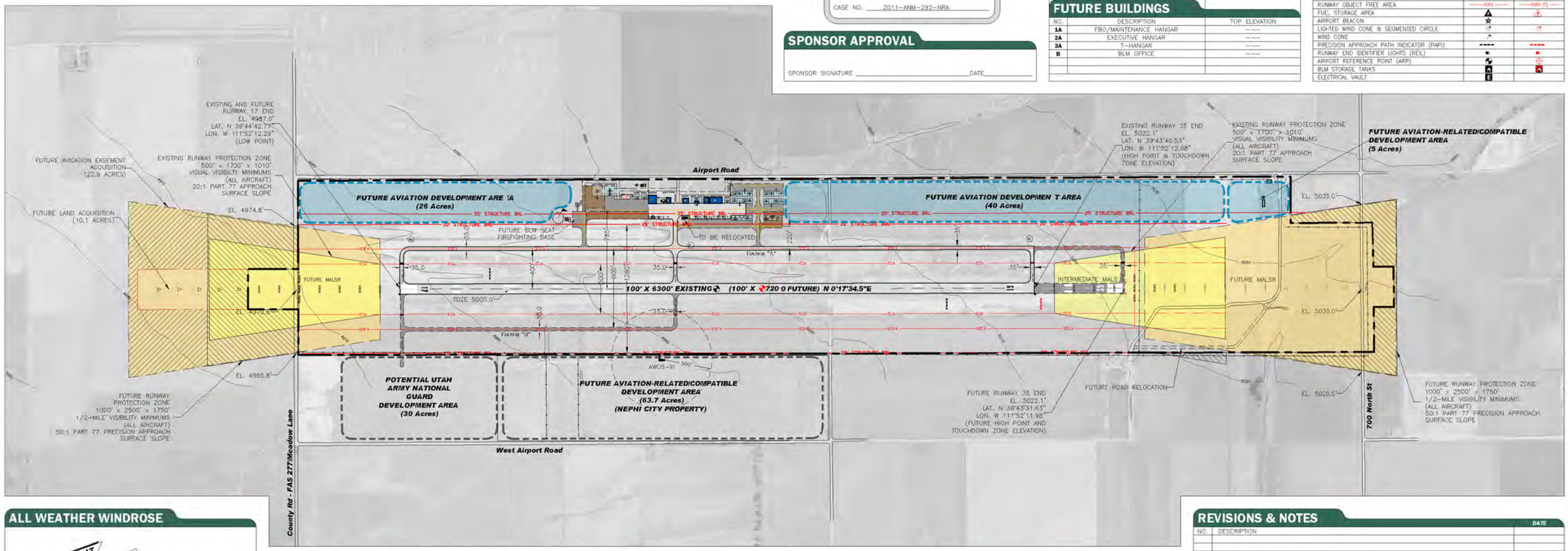
NO.	DESCRIPTION	TOP ELEVATION
1	FBO/CORPORATE HANGAR	--.--
2	PILOTS LOUNGE/OFFICE	5025.9'
3	AIRPORT MAINTENANCE HANGAR	--.--
4	EXECUTIVE HANGAR	5024.0'
5	EXECUTIVE HANGAR(TO BE REMOVED)	5020.2'
6	EXECUTIVE HANGAR	--.--
7	EXECUTIVE HANGAR	--.--

FUTURE BUILDINGS

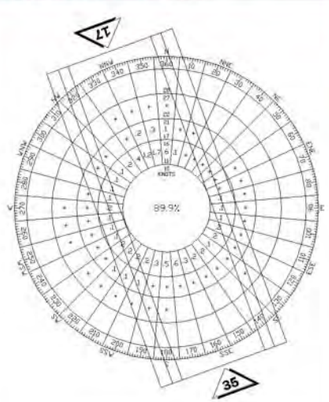
NO.	DESCRIPTION	TOP ELEVATION
1A	FBO/MAINTENANCE HANGAR	--.--
2A	EXECUTIVE HANGAR	--.--
3A	T-HANGAR	--.--
B	BLM OFFICE	--.--

DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
AIRPORT SECURITY FENCE	X	XX
AIRPORT BUILDINGS		
AIRFIELD PAVEMENT		
ULTIMATE AIRPORT BUILDINGS (Beyond 20 Years)		
ULTIMATE AIRFIELD PAVEMENT (Beyond 20 Years)		
PAVED ROADS		
RUNWAY PROTECTION ZONE		
AVIGATION EASEMENT		
BUILDING RESTRICTION LINE	BRL	BRL
RUNWAY SAFETY AREA	RSA	RSA (F)
RUNWAY OBJECT FREE AREA	ROFA	ROFA (F)
FUEL STORAGE AREA	A	A
AIRPORT BEACON		
LIGHTED WIND CONE & SEGMENTED CIRCLE		
WIND CONE		
PRECISION APPROACH PATH INDICATOR (PAPI)		
RUNWAY END IDENTIFIER LIGHTS (REIL)		
AIRPORT REFERENCE POINT (ARP)		
BLM STORAGE TANKS	A	A
ELECTRICAL VAULT	E	



ALL WEATHER WINDROSE



Wind Coverage Provided Under All Weather Conditions

RUNWAY	10.5-KNOT	13-KNOT	16-KNOT	20-KNOT
Runway 17/35	98.13%	99.03%	99.75%	99.96%
Runway 17	83.27%	84.07%	84.70%	84.89%
Runway 35	71.15%	71.54%	71.94%	72.03%

Source: Wind analysis tabulation provided by Barnard Dunkelberg & Company utilizing the FAA Airport Design Software supplied with AC 150/5300-13.

Note: Wind data obtained by the Utah Department of Transportation, Division of Aeronautics, from Nephi Municipal Airport, Nephi, Utah. Period of Record = October 1995-May 2000. Total Observations: 37,345.

LOCATION MAP

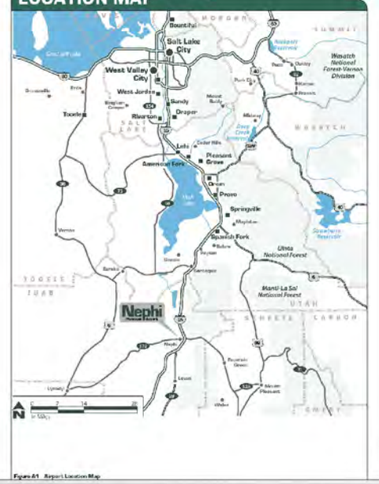
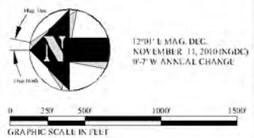


Figure A1 Airport Location Map

VICINITY MAP

Figure A2 Airport Vicinity Map



RUNWAY INFORMATION

	RUNWAY 17/35 EXISTING	RUNWAY 17/35 FUTURE
APPROACH VISIBILITY MINIMUMS	VISUAL/VISUAL	*1/2-MILE/1/2-MILE*
FAR PART 77 APPROACH SLOPE	20:1/20:1	*50:1/50:1*
FAR PART 77 APPROACH CATEGORY	VISUAL/VISUAL	*PIR/PIR*
RUNWAY LENGTH x WIDTH	100' x 6300'	*100' x 7200'*
RUNWAY PAVEMENT TYPE	ASPHALT	*SAME*
PAVEMENT STRENGTH (IN 1000 LBS.)	21sw, 30dw	*SAME*
RUNWAY LIGHTING	MIRL	*SAME*
RUNWAY MARKING	NON-PREC	*SAME*
EFFECTIVE RUNWAY GRADIENT %	0.62	*SAME*
RUNWAY LINE-OF-SIGHT	CRITERIA MET	*SAME*
VISUAL APPROACH AIDS	PAPI,REILS	*PAPI,MALSR*
NAVAIDS (ELECTRONIC)	BEACON	*BEACON,GPS*
AIRPORT REFERENCE CODE	C-II	*SAME*
RUNWAY SAFETY AREA (RSA) WIDTH	500'	*SAME*
RSA LENGTH BEYOND STOP END	1000'	*1000'*
RUNWAY OBJECT FREE AREA (OFA) WIDTH	800'	*SAME*
OFA LENGTH BEYOND STOP END	1000'	*SAME*
OBSTACLE FREE ZONE (OFZ) WIDTH *	400'	*SAME*
OFZ LENGTH BEYOND STOP END *	200'	*SAME*
RUNWAY CENTERLINE TO HOLD LINE	250'	*SAME*
COMBINED % WIND COVERAGE (10.5,13,16)	98.13%,99.03%,99.75%	*SAME*

* No OFZ object penetrations

RUNWAY END DATA

		RUNWAY 17	RUNWAY 35
RUNWAY END COORDINATES	EXISTING	LAT. N 39°44'42.77" LON. W 111°52'12.29"	LAT. N 39°43'40.53" LON. W 111°52'12.08"
	FUTURE	*SAME*	*LAT. N 39°43'31.63" LON. W 111°52'11.98"*
RUNWAY ELEVATIONS		RUNWAY 17/35 EXISTING	RUNWAY 17/35 FUTURE
	END	4987.0'/5022.1'	*SAME*
	HIGH POINT	5022.1'	*SAME*
	LOW POINT	4987.0'	*SAME*
	TOUCHDOWN ZONE ELEVATION (TDZE)	5005.0'/5022.1'	*SAME*

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. The preparation of this plan was financed in part through a planning grant from the Federal Aviation Administration as provided under Section 505 of the Airport and Airway Improvement Act of 1982, as amended. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this plan by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public laws.
2. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
3. Aerial Photo by Aerial Data Service, INC. October 2007.
4. Horizontal coordinate data in NAD83, vertical data is NAVD88.
5. No threshold siting surface object penetrations.
6. There are no FAA approved modifications to standards or non-standard conditions at this airport.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT LAYOUT DRAWING

Barnard Dunkelberg & Company

TULSA
1616 East 15th Street
Tulsa, Oklahoma 74120
918.585.8844

DENVER
1743 Wazee Street, Suite 400
Denver, Colorado 80202
303.825.8844

DATE
AUGUST 2011

SCALE
1" = 500'

SHEET NO.
1 OF 14

- **Instrument Approach Criteria:** The ALP will illustrate future instrument approach implementation to both runway ends and the procedures will likely be phased-in through the planning period The ultimate instrument approach procedures that are being planned include:

  Runway 17: Global positioning system (GPS) instrument approach with lower-than ½-mile visibility minimums.

  Runway 35: GPS instrument approach with lower-than ½-mile visibility minimums.

- **Runway Protection Zone (RPZ):** In regards to the existing visual approaches for each runway end, and the type of aircraft the runway is currently accommodating, the existing RPZ dimensions can be maintained at 500' x 1,750' x 1,010', in consideration of the ARC C-II dimensional criteria. However, the RPZ dimensions would have to be enlarged to accommodate the implementation of instrument approach procedures offering visibility minimums lower than ¾-mile. The future size of the RPZ for Runway 17 would increase to 1,000' x 2,500' x 1,750' in conjunction with the implementation of the future ILS/GPS approach with ½ mile visibility minimums. The future size of the RPZ for Runway 35 would increase to 1,000' x 1,700' x 1,510' in conjunction with implementation of the future GPS approach with greater-than ¾-mile visibility minimums.

- **Runway Lighting & Navigational Aids:** Maintain the placement of the runway's existing Medium Intensity Runway Lights (MIRLs), the Precision Approach Path Indicator (PAPI) lights, and the Runway End Identifier Lights (REILs) serving each runway end. In addition, it is recommended the Runway 17 REILs be maintained only until the need for a future Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) is confirmed, contingent upon the visibility minimums that can be achieved with the future instrument approach procedures at the Airport. In the intermediate term (six to ten years), it is recommended that a Medium Intensity Approach Lighting System (MALS) be installed off the Runway 35 in conjunction with the future GPS approach. In the long-term, the Runway 35 MALS will be upgraded to a MALSR following the 900 foot extension to Runway 35.

Taxiway System

The development recommendations for the Airport's taxiway system are presented in the following text.

- **Dimensions:** The ALP will reflect the maintenance of the Airport's existing parallel taxiway

system serving Runway 17/35. Taxiway "A" will remain 35 feet wide, and is proposed to be extended 900 feet in conjunction with the future 900-foot runway extension. It is also proposed that a taxiway connector system be constructed on the west side of the runway for direct access to the future Army National Guard development area facilities. Additional access taxiways and taxilanes will be constructed to serve the Bureau of Land Management (BLM) development area, and the hangar development and expansion areas on the east side of the Airport.

- **Pavement:** The existing taxiway pavement is to be maintained.
- **Taxiway Lighting:** The existing system of Medium Intensity Taxiway Lights (MITLs) associated with Taxiway "A" is to be maintained.

Property/Easement Acquisition or Release

The Airport Sponsor (i.e., Nephi City) presently owns the majority of the property associated with the existing RPZs at each runway end. A portion of the Runway 17 RPZ extends beyond airport property, which the Airport Sponsor controls through an avigation easement. However, with the future instrument approach implementations to Runway 17, approximately 33 acres of property acquisition, or a combination of property acquisition and avigation easement is recommended to control the balance of the future enlarged Runway 17 RPZs. This specified property/easement transaction is summarized as follows:

- **Runway 17 RPZ Property Acquisition.** 33 acres total or 10.9 acres in fee simple and 22.9 in easement (future approach RPZ).

It is recommended, that at a minimum, the Airport Sponsor maintain the existing easements for the future Runway 35 RPZs.

Airspace Plan

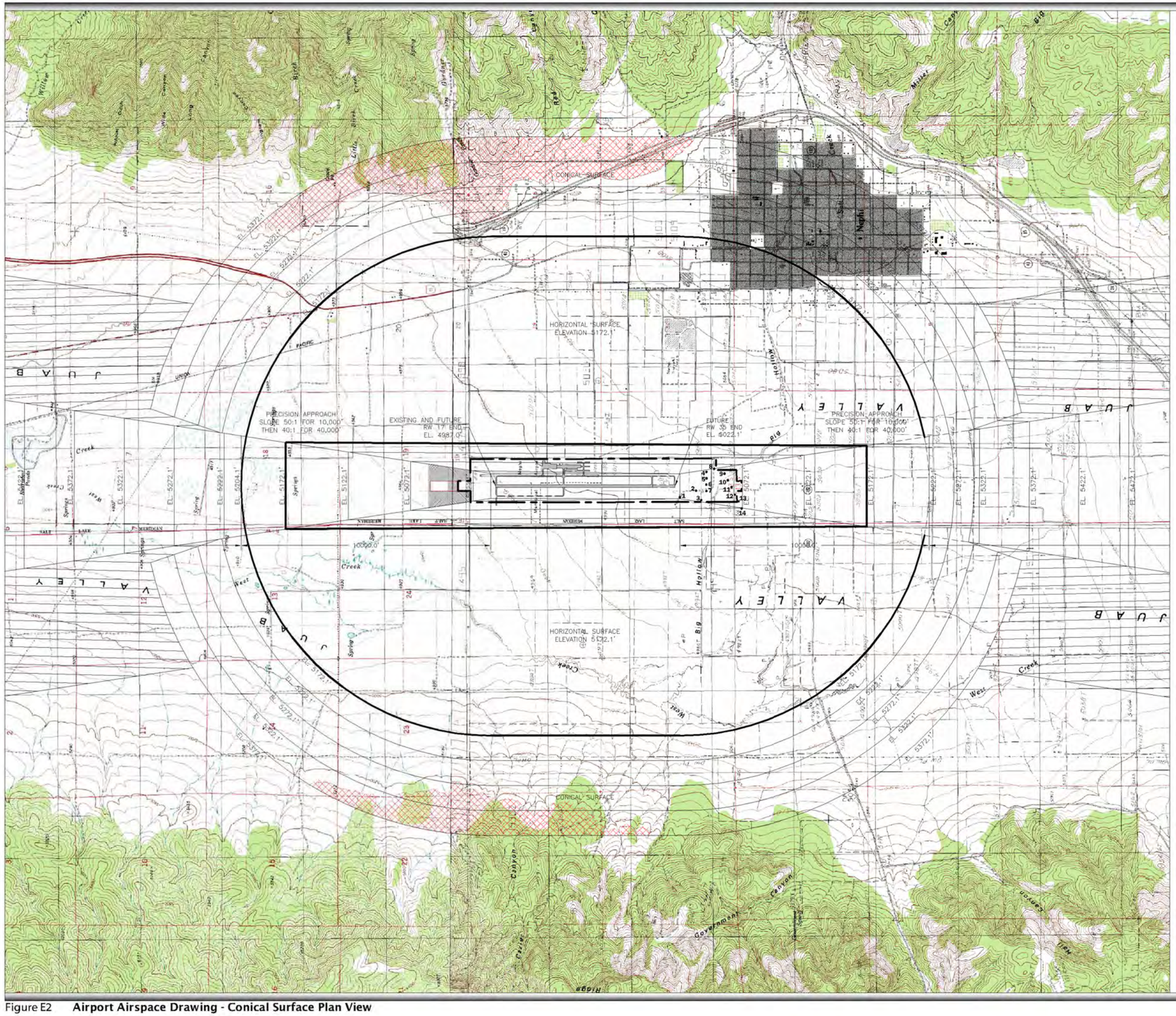
The Airspace Plan for the Airport is based upon Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*. In order to protect the Airport's airspace and approaches from hazards that could affect the safe and efficient operation of aircraft, federal criteria contained in the FAR Part 77 document have been established to provide guidance in controlling the height of objects in the vicinity of the Airport. FAR Part 77 criteria specify a set of imaginary surfaces which, when penetrated, designate an object as being an obstruction. However, some obstructions can be determined to be non-hazardous by an aeronautical study by virtue of their location and/or marked and lighted as specified in the aeronautical study determination. Airfield navigational aids, as well as

lighting and visual aids, by nature of their location, may constitute obstructions, but these objects do not violate FAR Part 77 criteria, as they are essential to the operation of the Airport.

The Airspace Plan, which is illustrated in the following figures, provides plan and profile views that depict these criteria as they specifically relate to Nephi Municipal Airport. The plan is based on the ultimate planned runway length, along with the ultimate planned approaches to each runway end. Therefore, these figures reflect larger-than-utility airport criteria for Runway 17/35. Runway 17/35 will be protected for a future precision approach to both ends.

As specified by FAR Part 77 guidelines, the dimension for the precision instrument approach surfaces for the future Runway 17/35 measures 1,000 feet at the inner width, 16,000 feet at the outer width, and extends for a horizontal distance of 10,000 feet at an approach slope angle of 50:1, and an additional horizontal distance of 40,000 feet at an approach slope angle of 40:1.

According to the application of these various approach criteria, as well as the criteria for the primary, transitional, horizontal, and conical surfaces, 14 obstructions were identified and distributed within the Runway 35 primary approach surface slope. It should be noted that these identified obstructions will be evaluated by the FAA through the airspace review process (i.e., an aeronautical study) to reach a hazard/no hazard determination and disposition for each obstruction.



OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PENETRATION	SURFACE	DISPOSITION
1	DIRT ROAD	5021.0'	15'	PRIMARY	TO BE RELOCATED
2	DIRT ROAD	5025.0'	9.3'	35 APPROACH	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	3.3'	35 APPROACH	TO REMAIN
4	POWER POLE	5067.0'	26.1'	35 APPROACH	TO BE RELOCATED
5	POWER POLE	5065.0'	24.1'	35 APPROACH	TO BE RELOCATED
6	POWER POLE	5063.0'	22.1'	35 APPROACH	TO BE RELOCATED
7	POWER POLE	5061.9'	20.1'	35 APPROACH	TO BE RELOCATED
8	ROAD	5034.0'	0.0'	35 APPROACH	TO REMAIN
9	POWER POLE	5076.4'	19.9'	35 APPROACH	TO BE RELOCATED
10	POWER POLE	5076.4'	17.5'	35 APPROACH	TO BE RELOCATED
11	POWER POLE	5073.4'	11.7'	35 APPROACH	TO BE RELOCATED
12	POWER POLE	5076.4'	11.5'	35 APPROACH	TO BE RELOCATED
13	POWER POLE	5076.0'	8.2'	35 APPROACH	TO BE RELOCATED
14	POWER POLE	5076.0'	5.5'	35 APPROACH	TO BE RELOCATED

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.
NOTE: SEE INNER PORTION OF THE APPROACH SURFACE – RUNWAY 35 DRAWING FOR CLOSE-IN OBSTRUCTIONS.

DRAWING LEGEND

	EXISTING	FUTURE
TERRAIN OBSTRUCTION		
AIRPORT PROPERTY LINE		
AVIGATION EASEMENT		

12°00' E(MAG.)DEC
NOVEMBER 16,2010(NOAA)
8.7'W ANNUAL CHANGE

0 1000' 2000' 4000' 6000'
GRAPHIC SCALE IN FEET

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Aerial Photo by Aerial Data Service, INC, October 2007.
3. Elevation and Coordinate data from http://avnwww.jccbi.gov/pls/datasheet_prd/plsq_airport.PRO_AIRPORT_RUNWAY?v_cnt_num=26582. Horizontal coordinate data is NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT AIRSPACE DRAWING
CONICAL SURFACE (PLAN VIEW)

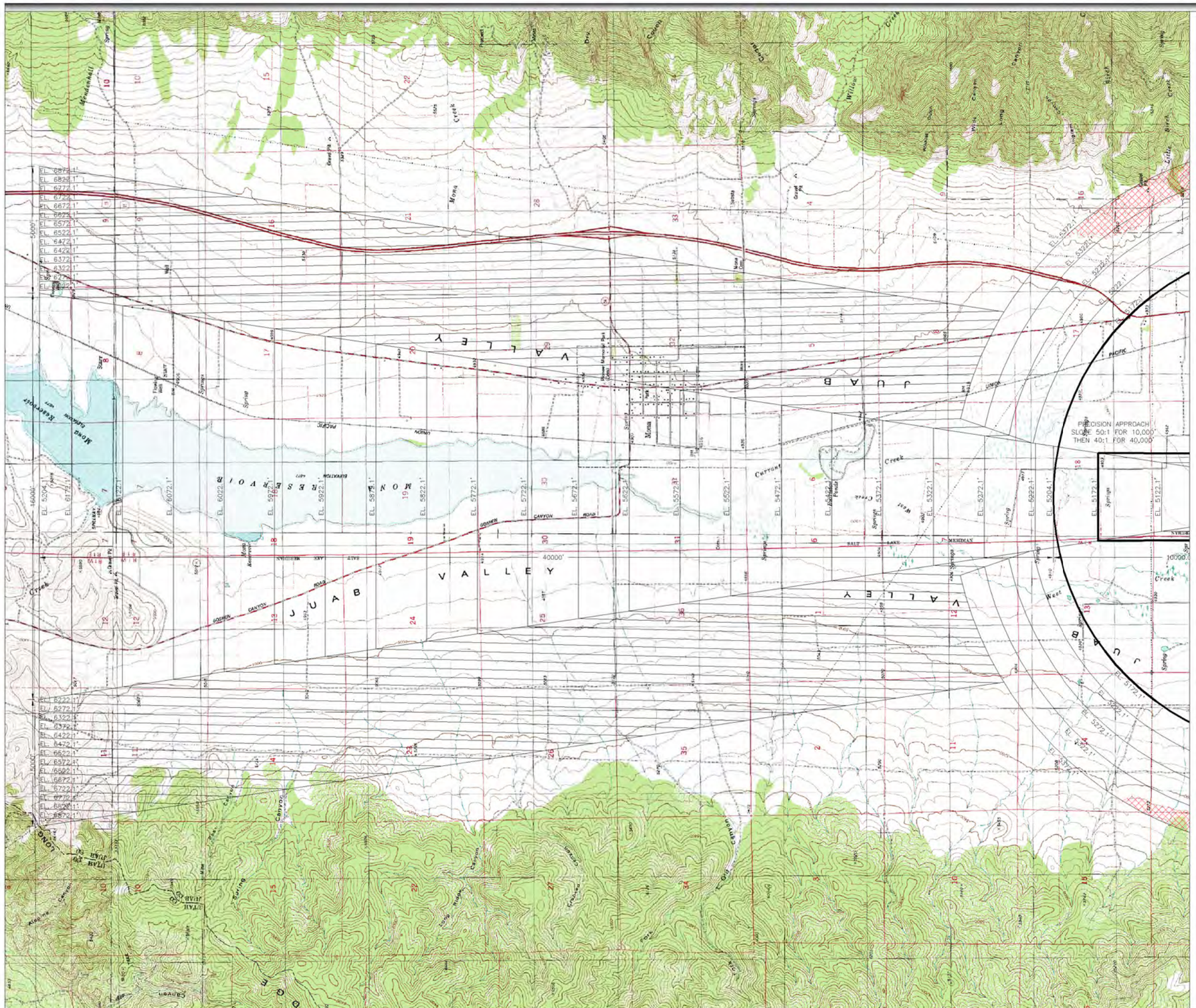
Barnard Dunkelberg & Company
TULSA
1616 East 15th Street
Tulsa, Oklahoma 74120
918.585.8841
DENVER
1743 Wazee Street, Suite 800
Denver, Colorado 80202
303.825.8841

DATE
AUGUST 2011

SCALE
1" = 400'

SHEET NO.
2 OF 14

Figure E2 **Airport Airspace Drawing - Conical Surface Plan View**



OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PENETRATION	SURFACE	DISPOSITION
	NONE				

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.

DRAWING LEGEND

TERRAIN OBSTRUCTION

12°00' E(MAG DEC.
NOVEMBER 13, 2010(NGDC)
8.7' W ANNUAL CHANGE

0 1000' 2000' 4000' 6000'
GRAPHIC SCALE IN FEET

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

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3. Elevation and Coordinate data from http://avnwww.jccbi.gov/pls/datasheet_prd/pkg_airport.PRO_AIRPORT_RUNWAY?v_cntl_num=26592. Horizontal coordinate data is NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT AIRSPACE DRAWING
RUNWAY 17 EXTENDED APPROACH (PLAN VIEW)

Barnard Dunkelberg & Company

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DATE
AUGUST 2011

SCALE
1" = 400'

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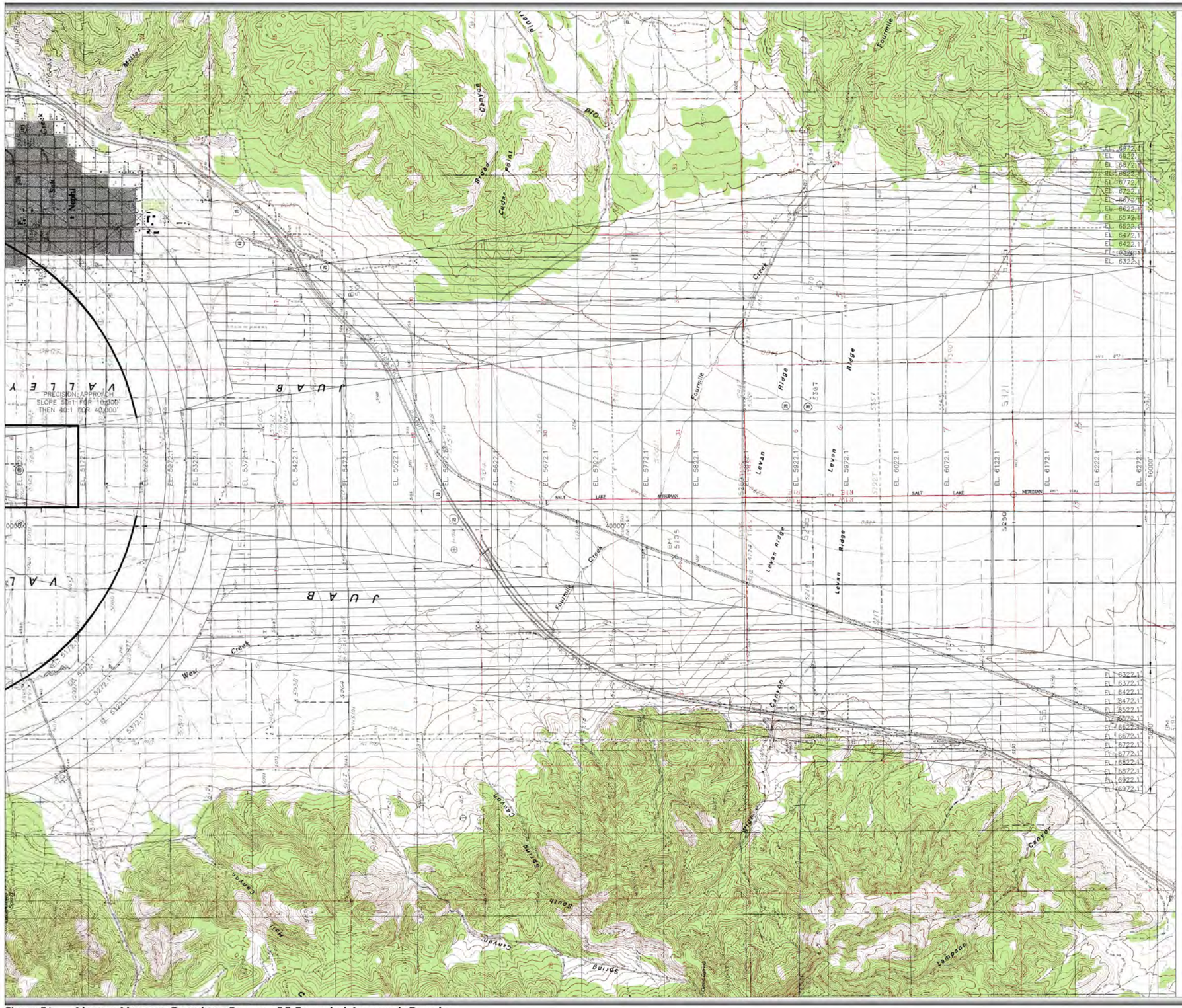
3 OF 14

Figure E3 **Airport Airspace Drawing - Runway 17 Extended Approach Drawing**



OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PENETRATION	SURFACE	DISPOSITION
1	DIRT ROAD	5021.0'	15'	PRIMARY	TO BE RELOCATED
2	DIRT ROAD	5025.0'	9.3'	35 APPROACH	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	3.3'	35 APPROACH	TO REMAIN
4	POWER POLE	5067.0'	26.1'	35 APPROACH	TO BE RELOCATED
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9	POWER POLE	5076.4'	19.9'	35 APPROACH	TO BE RELOCATED
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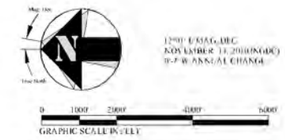
14	POWER POLE	5076.0'	5.5'	35 APPROACH	TO BE RELOCATED

NOTE: SEE INNER PORTION OF THE APPROACH SURFACE – RUNWAY 35 DRAWING FOR CLOSE-IN OBSTRUCTIONS.

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.



REVISIONS & NOTES

NO.	DESCRIPTION	DATE

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NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT AIRSPACE DRAWING
RUNWAY 35 EXTENDED APPROACH (PLAN VIEW)

Barnard Dunkelberg & Company

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Denver, Colorado 80202
303.825.8841

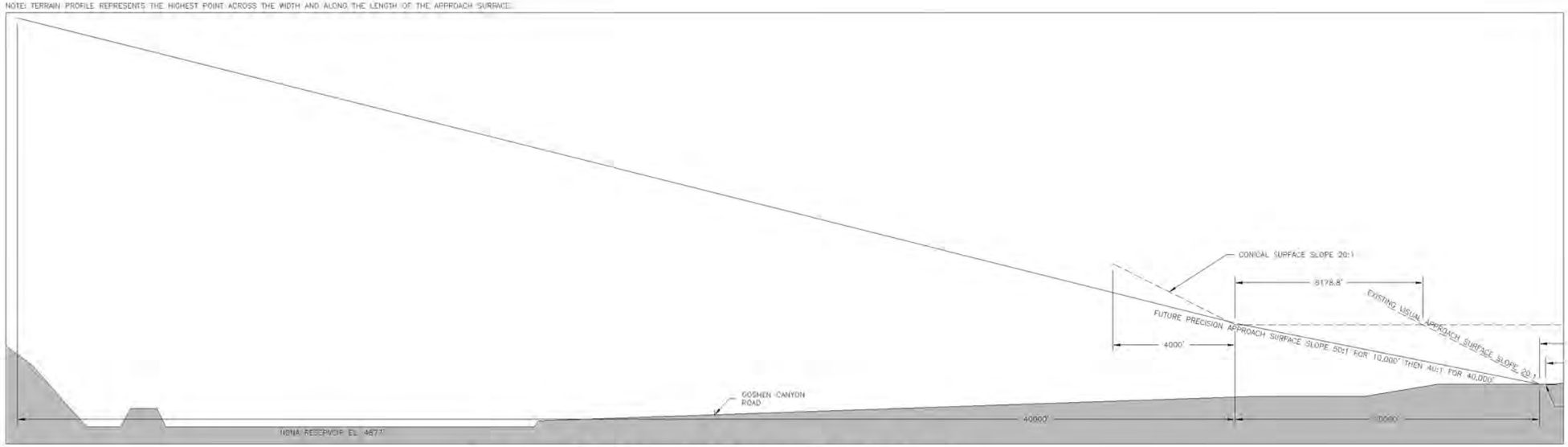
DATE
AUGUST 2011

SCALE
1" = 400'

SHEET NO.
4 OF 14

Figure E4 **Airport Airspace Drawing - Runway 35 Extended Approach Drawing**

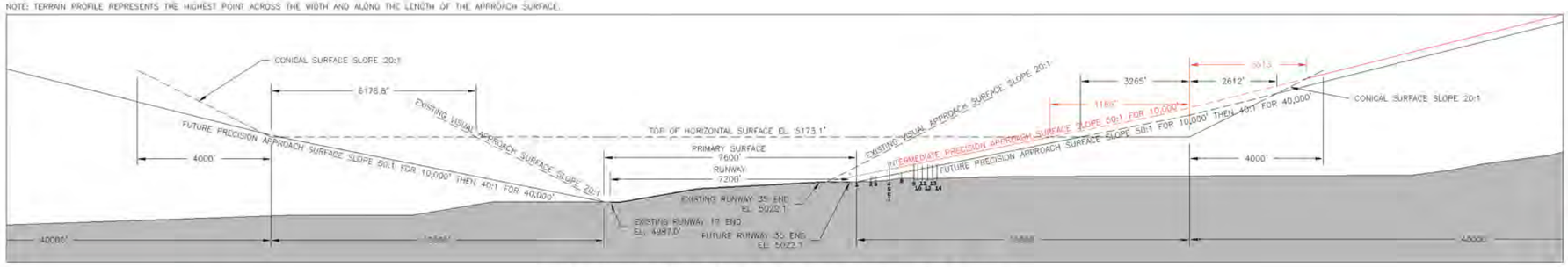
NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.



Runway 17 - Extended Approach Profile View

1" = 2000' HORIZONTALLY
1" = 200' VERTICALLY

NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.



Runway 17/35 - Approach Profile View

1" = 2000' HORIZONTALLY
1" = 200' VERTICALLY

OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PENETRATION	SURFACE	DISPOSITION
1	DIRT ROAD	5021.0'	15'	PRIMARY	TO BE RELOCATED
2	DIRT ROAD	5025.0'	9.5'	35 APPROACH	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	3.5'	35 APPROACH	TO REMAIN
4	POWER POLE	5067.9'	26.1'	35 APPROACH	TO BE RELOCATED
5	POWER POLE	5065.9'	24.1'	35 APPROACH	TO BE RELOCATED
6	POWER POLE	5063.9'	22.1'	35 APPROACH	TO BE RELOCATED
7	POWER POLE	5061.9'	20.1'	35 APPROACH	TO BE RELOCATED
8	ROAD	5034.0'	0.0'	35 APPROACH	TO REMAIN
9	POWER POLE	5076.4'	19.9'	35 APPROACH	TO BE RELOCATED
10	POWER POLE	5076.4'	17.5'	35 APPROACH	TO BE RELOCATED
11	POWER POLE	5073.4'	11.7'	35 APPROACH	TO BE RELOCATED
12	POWER POLE	5076.4'	11.5'	35 APPROACH	TO BE RELOCATED
13	POWER POLE	5076.0'	8.2'	35 APPROACH	TO BE RELOCATED
14	POWER POLE	5076.0'	5.5'	35 APPROACH	TO BE RELOCATED

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation or navigation.
2. Aerial Photo by Aerial Data Service, INC. October 2007.
3. Elevation and Coordinate data from http://avnwww.jcatii.gov/pls/dataSheet_pr4/pkg_airport.PRO_AIRPORT_RUNWAY?v_cnt_num=26592. Horizontal coordinate data is NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT AIRSPACE DRAWING
RUNWAY 17 APPROACH PROFILES

Barnard Dunkelberg & Company

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DENVER
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303.825.8844

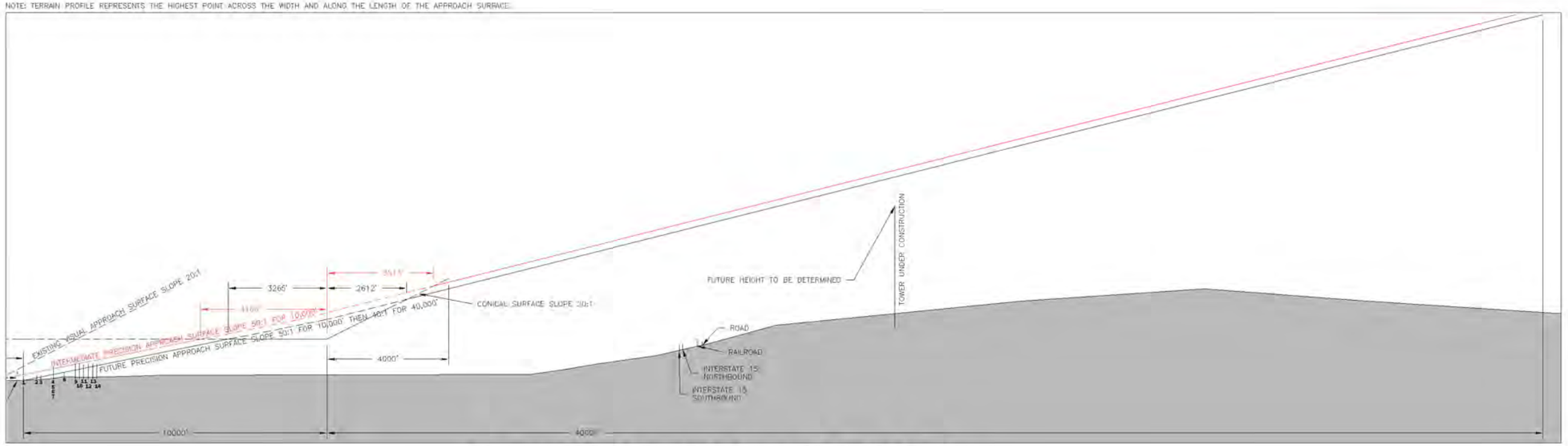
DATE
AUGUST 2011

SCALE
1" = 400'

SHEET NO.
5 OF 14

Figure E5 **Airport Airspace Drawing - Runway 17 Approach Profiles**

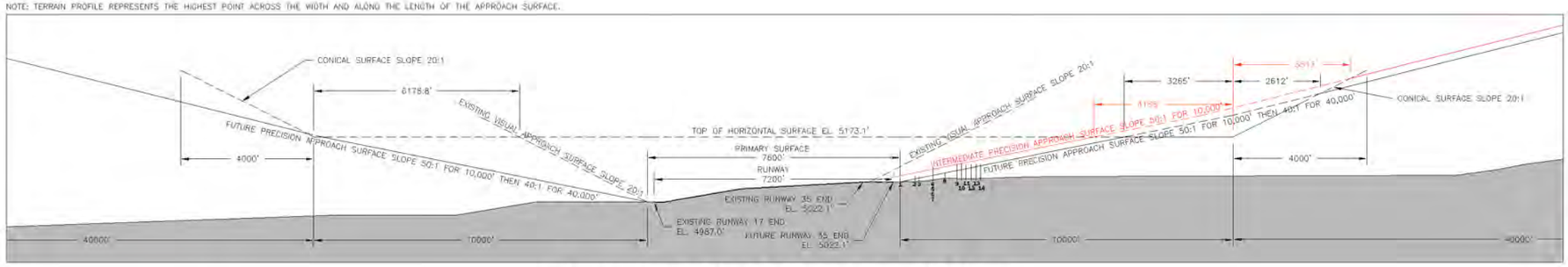
NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.



Runway 35 - Extended Approach Profile View

1" = 2000' HORIZONTALLY
1" = 200' VERTICALLY

NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.



Runway 17/35 - Approach Profile View

1" = 2000' HORIZONTALLY
1" = 200' VERTICALLY

OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	EXISTING PENETRATION	INTERMEDIATE PENETRATION	FUTURE PENETRATION	SURFACE	DISPOSITION
1	DIRT ROAD	5021.0'	0'	0'	15'	PRIMARY	TO BE RELOCATED
2	DIRT ROAD	5025.0'	0'	0'	9.3'	35 APPROACH	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	0'	0'	3.1'	35 APPROACH	TO REMAIN
4	POWER POLE	5067.9'	0'	8.1'	26.1'	35 APPROACH	TO BE RELOCATED
5	POWER POLE	5065.9'	0'	8.1'	24.1'	35 APPROACH	TO BE RELOCATED
6	POWER POLE	5063.9'	0'	8.1'	22.1'	35 APPROACH	TO BE RELOCATED
7	POWER POLE	5061.9'	0'	2.1'	20.1'	35 APPROACH	TO BE RELOCATED
8	ROAD	5034.0'	0'	0'	0.0'	35 APPROACH	TO REMAIN
9	POWER POLE	5076.4'	0'	1.9'	19.9'	35 APPROACH	TO BE RELOCATED
10	POWER POLE	5076.4'	0'	0'	17.5'	35 APPROACH	TO BE RELOCATED
11	POWER POLE	5073.4'	0'	0'	11.7'	35 APPROACH	TO BE RELOCATED
12	POWER POLE	5076.4'	0'	0'	11.5'	35 APPROACH	TO BE RELOCATED
13	POWER POLE	5076.0'	0'	0'	8.2'	35 APPROACH	TO BE RELOCATED
14	POWER POLE	5076.0'	0'	0'	5.5'	35 APPROACH	TO BE RELOCATED

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation or navigation.
2. Aerial Photo by Aerial Data Service, INC. October 2007.
3. Elevation and Coordinate data from http://avnwww.jcbi.gov/pls/dataSheet_pr4/pkg_airport.PRO_AIRPORT_RUNWAY?v_cnt_num=26592. Horizontal coordinate data is NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT AIRSPACE DRAWING
RUNWAY 35 APPROACH PROFILES

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DATE
AUGUST 2011

SCALE
1" = 400'

SHEET NO.
6 OF 14

Figure E6 **Airport Airspace Drawing - Runway 35 Approach Profiles**

Inner Portion of the Approach Surface Plans

To provide a more detailed view of the inner portions of the Part 77 imaginary approach surfaces and the Runway Protection Zones (RPZs), the following drawings are provided. An RPZ is trapezoidal in shape, centered about the extended runway centerline, and typically begins 200 feet beyond the end of the runway. The RPZs are essentially an expanded area of the runway safety areas within which it is desirable to clear all objects (although some uses are normally acceptable). The size of the RPZ is contingent upon the approach category of the design aircraft and the visibility minimums associated with the type of approach (visual and lower than ¾-mile).

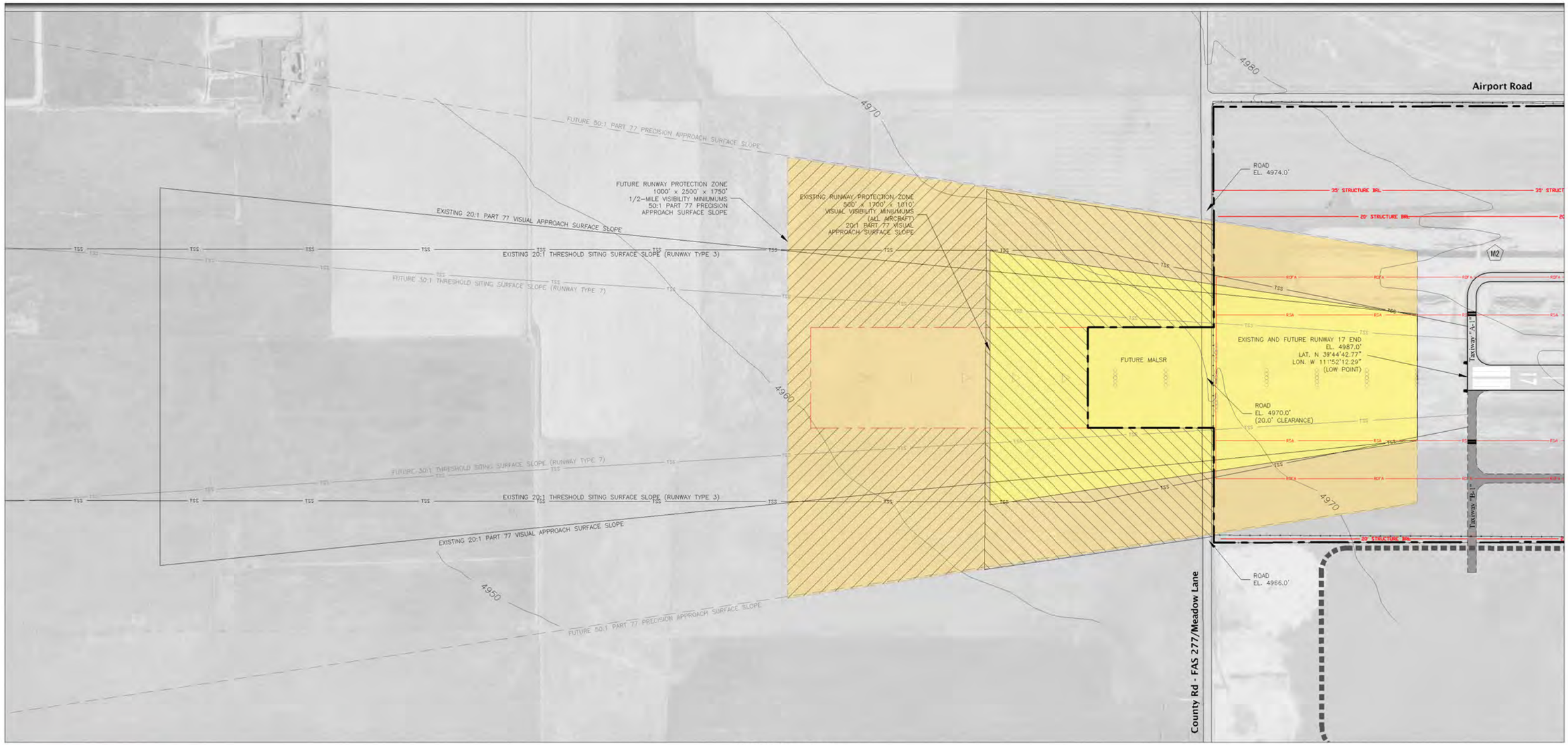
As noted in previous sections, the future RPZ dimensions for both runway ends will be enlarged from their existing dimensions of 500' x 1,700' x 1,010'. The future RPZ dimensions for Runway 17/35 are to be enlarged to 1,000' x 1,750' x 2,500'.

Generally speaking, the Airport Sponsor, as either fee simple acquisition or as an RPZ easement, should control the RPZs, with fee simple being the preferred type of ownership. If an easement is purchased, it is a purchase of the air rights over the actual ground. Nephi City currently owns most of the property within the existing RPZs. However, a large portion of the future Runway 17 RPZ has been identified for future fee simple, or avigation easement acquisition.

The *Inner Portions of the Approach Surface Drawings* that are depicted in Figures E7 through E10 provide large-scale drawings with both plan and profile delineations. They are intended to facilitate identification of the roadways, utility lines, railroads, structures, and other possible obstructions that may lie within the confines of the inner approach surface area associated with each runway end. In addition, these drawings illustrate the approach clearance requirements specified by threshold siting criteria. According to Appendix 2 information presented in AC 150/5300-13, "the standard shape, dimensions, and slope of the surface used for locating a threshold are dependent upon the type of aircraft operations currently conducted or forecast, the landing visibility minimums desired, and the types of instrumentation available or planned for that runway end." For Nephi Municipal Airport, the following threshold siting surfaces were identified for evaluation:

- **Existing Runway 17 and 35:** Runway Type "3" [Approach end of runways expected to accommodate large airplanes (visual day or night); or instrument approaches having visibility minimums > one statute mile (day only)].
- **Future Runway 17 and 35:** Runway Type "7" [Approach end of runways expected to accommodate approaches with positive vertical guidance (GQS)].

As with the *Airspace Plan*, the *Inner Portion of the Approach Surface Drawings* is based on the ultimate planned runway length, along with the ultimate planned approach to each runway end. According to the application of these threshold siting surface criteria, 14 obstructions (ten power poles and four surface penetrations by one road) were identified within the Runway 35 extended approach surface that will be evaluated by the FAA through the airspace review process (i.e., an aeronautical study). Regarding the disposition of these obstructions, it is likely that the roads and power poles would be recommended for relocation.



RUNWAY 16 PLAN

1" = 200'

OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PART 77 PENETRATION	TSS PENETRATION	DISPOSITION
	NO PENETRATIONS TO RUNWAY 17 SURFACES				

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.

12°01' E MAG. DEC.
NOVEMBER 11, 2010 (NGDC)
0.1° W ANNUAL CHANGE

0 250' 500' 1000' 1500'
GRAPHIC SCALE IN FEET

DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
AIRPORT SECURITY FENCE	X	XX
AIRFIELD PAVEMENT		
PAVED ROAD/S		
RUNWAY PROTECTION ZONE		
AVIGATION EASEMENT		
BUILDING RESTRICTION LINE	BRL	BRL
RUNWAY SAFETY AREA	RSA	RSA (F)
RUNWAY OBJECT FREE AREA	ROFA	ROFA (F)

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Horizontal coordinate data in NAD83, vertical data is NAVD88.
3. Threshold siting surface criteria standards determined by FAA Advisory Circular 150/5300-13, *Airport Design*, Change 15, Appendix 2, Table A2-1.

NEPHI MUNICIPAL AIRPORT

Nephi City, Utah

INNER PORTION OF THE APPROACH SURFACE

RUNWAY 17 (PLAN VIEW)

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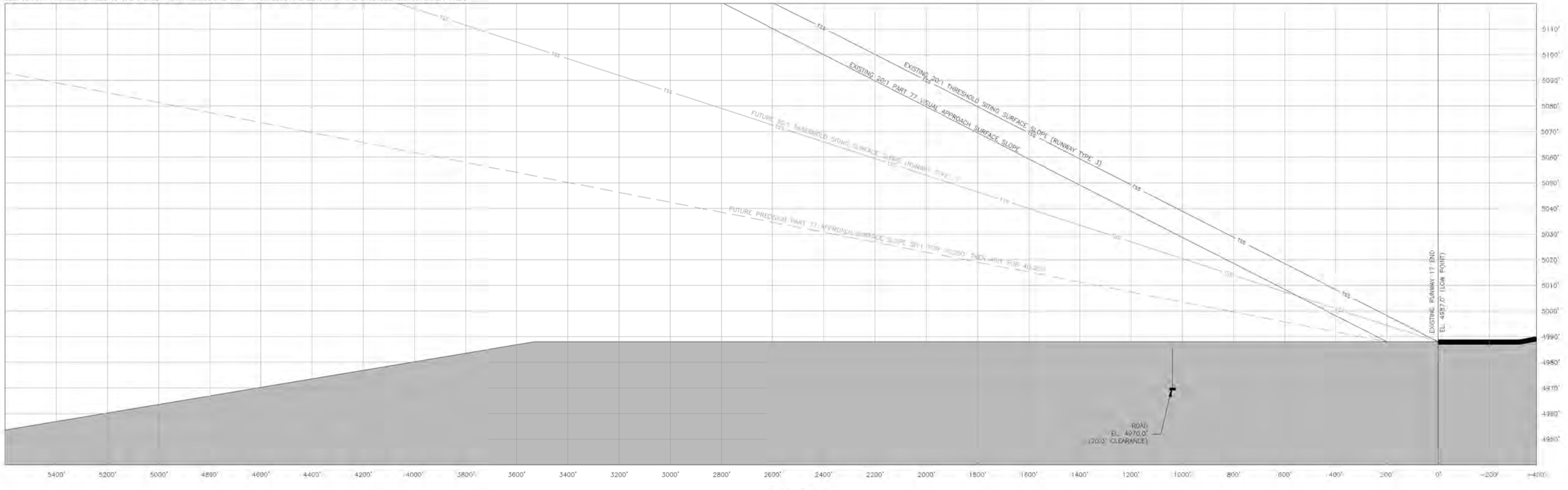
DATE
AUGUST 2011

SCALE
VARIES

SHEET NO.
7 OF 14

Figure E7 **Inner Portion of the Approach Surface - Runway 17 Plan View**

NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE EXTENDED RUNWAY SAFETY AREA.



RUNWAY 17 PROFILE

1" = 200' HORIZONTALLY
1" = 20' VERTICALLY

OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PART 77 PENETRATION	TSS PENETRATION	DISPOSITION
	NO PENETRATIONS TO RUNWAY 17 SURFACES				

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Horizontal coordinate data in NAD83, vertical data is NAVD88.
3. Threshold siting surface criteria standards determined by FAA Advisory Circular 150/5300-13, Airport Design, Change 16, Appendix 2, Table A2-1.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

INNER PORTION OF THE APPROACH SURFACE
RUNWAY 17 (PROFILE VIEW)

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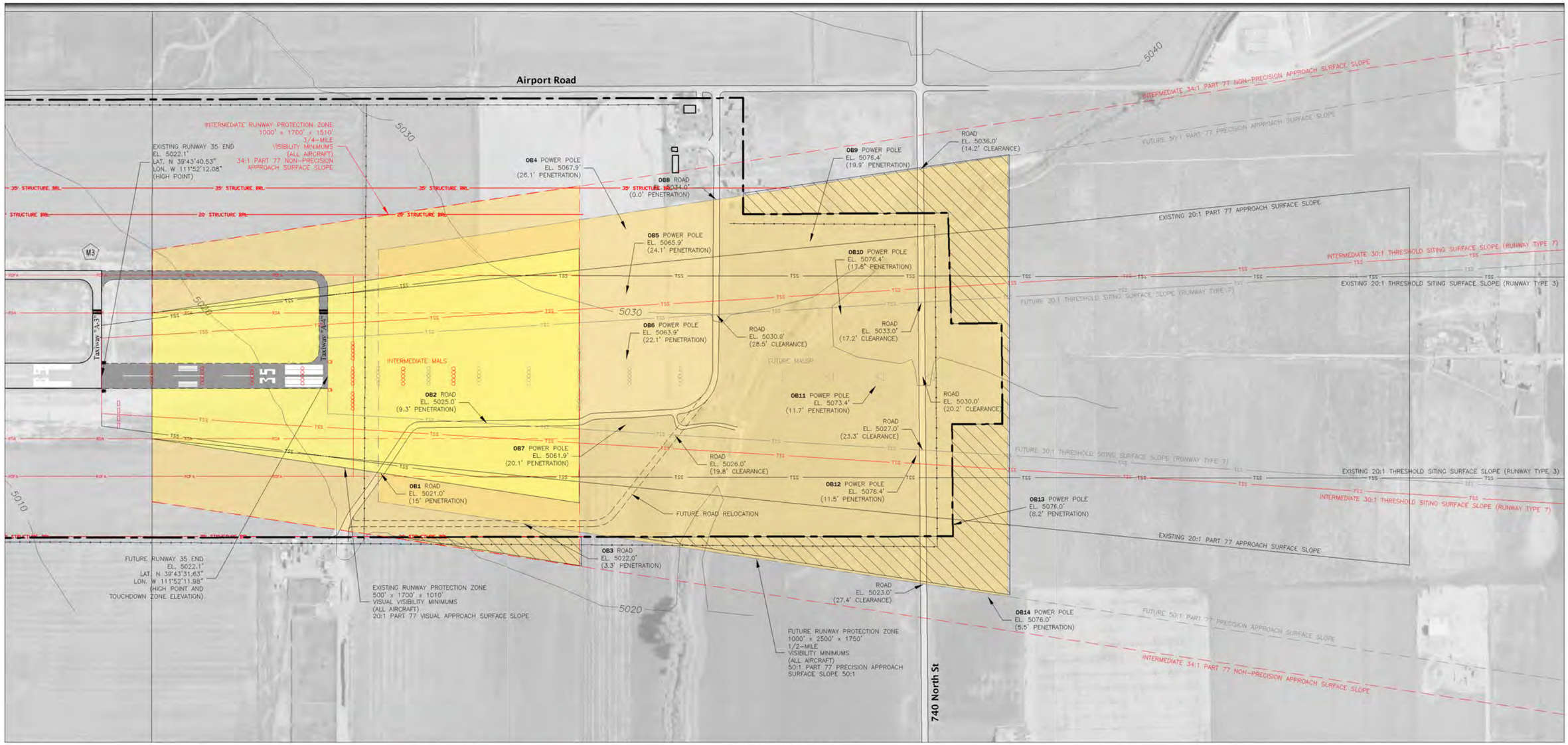
DATE
AUGUST 2011

SCALE
VARIES

SHEET NO.
8 OF 14

Figure E8 **Inner Portion of the Approach Surface - Runway 17 Profile View**



RUNWAY 35 PLAN

1" = 200'

DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
AIRPORT SECURITY FENCE	X	XX
AIRFIELD PAVEMENT		
ULTIMATE AIRFIELD PAVEMENT (Beyond 20 Years)		
PAVED ROADS		
RUNWAY PROTECTION ZONE		
AVIGATION EASEMENT		
BUILDING RESTRICTION LINE	BRL	BRL
RUNWAY SAFETY AREA	RSA	RSA (F)
RUNWAY OBJECT FREE AREA	ROFA	ROFA (F)

OBSTRUCTIONS

NO.	DESCRIPTION	EXISTING ELEVATION	EXISTING PART 77 PENETRATION	EXISTING TSS PENETRATION	INTERMEDIATE PART 77 PENETRATION	INTERMEDIATE TSS PENETRATION	FUTURE PART 77 PENETRATION	FUTURE TSS PENETRATION	DISPOSITION
1	DIRT ROAD	5021.0'	0'	NONE.	0'	NONE	15'	NONE	TO BE RELOCATED
2	DIRT ROAD	5025.0'	0'	NONE.	0'	NONE	9.3'	NONE	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	0'	NONE.	0'	NONE	3.3'	NONE	TO REMAIN
4	POWER POLE	5067.9'	0'	NONE.	8.1'	NONE	26.1'	NONE	TO BE RELOCATED
5	POWER POLE	5065.9'	0'	NONE.	6.1'	NONE	24.1'	NONE	TO BE RELOCATED
6	POWER POLE	5063.9'	0'	NONE.	4.1'	NONE	22.1'	2.2'	TO BE RELOCATED
7	POWER POLE	5061.9'	0'	NONE.	2.1'	NONE	20.1'	0.0'	TO BE RELOCATED
8	ROAD	5034.0'	0'	NONE.	0'	NONE	0.0'	NONE	TO REMAIN
9	POWER POLE	5076.4'	0'	NONE.	1.9'	NONE	19.9'	NONE	TO BE RELOCATED
10	POWER POLE	5076.4'	0'	NONE.	0'	NONE	17.5'	NONE	TO BE RELOCATED
11	POWER POLE	5073.4'	0'	NONE.	0'	NONE	11.7'	NONE	TO BE RELOCATED
12	POWER POLE	5076.4'	0'	NONE.	0'	NONE	11.5'	NONE	TO BE RELOCATED
13	POWER POLE	5076.0'	0'	NONE.	0'	NONE	8.2'	NONE	TO BE RELOCATED
14	POWER POLE	5076.0'	0'	NONE.	0'	NONE	5.5'	NONE	TO BE RELOCATED

NOTE: 15' ADDED TO ROAD ELEVATIONS TO DETERMINE OBSTRUCTION PENETRATION.

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.

12°01' E MAG. DEC.
NOVEMBER 11, 2010 (NGDC)
0.7° W ANNUAL CHANGE

0 250' 500' 1000' 1500'
GRAPHIC SCALE IN FEET

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Horizontal coordinate data in NAD83, vertical data is NAVD88.
3. Threshold siting surface criteria standards determined by FAA Advisory Circular 150/5300-13, *Airport Design*, Change 15, Appendix 2, Table A2-1.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

INNER PORTION OF THE APPROACH SURFACE
RUNWAY 35 (PLAN VIEW)

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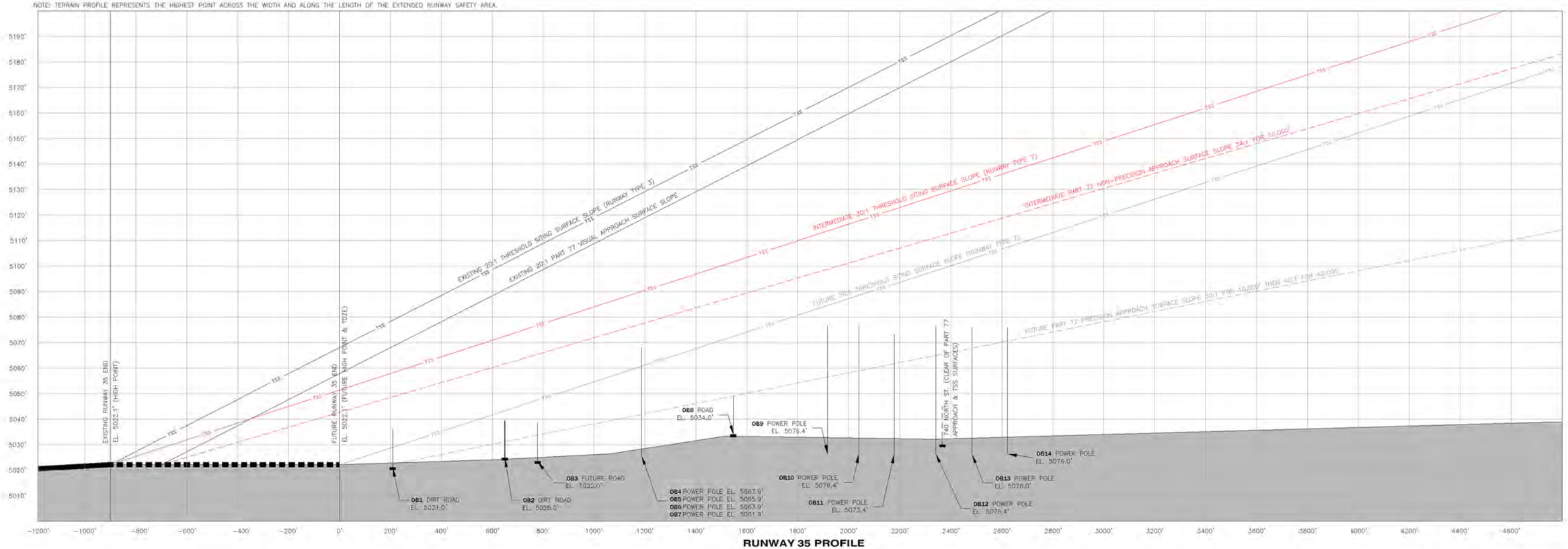
DATE
AUGUST 2011

SCALE
1" = 2000'

SHEET NO.
9 OF 14

Figure E9 **Inner Portion of the Approach Surface - Runway 35 Plan View**

NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE EXTENDED RUNWAY SAFETY AREA.



RUNWAY 35 PROFILE

1" = 200' HORIZONTALLY
1" = 20' VERTICALLY

OBSTRUCTIONS

			EXISTING		INTERMEDIATE		FUTURE		
NO.	DESCRIPTION	ELEVATION	PART 77 PENETRATION	TSS PENETRATION	PART 77 PENETRATION	TSS PENETRATION	PART 77 PENETRATION	TSS PENETRATION	DISPOSITION
1	DIRT ROAD	5021.0'	0'	NONE	0'	NONE	15'	NONE	TO BE RELOCATED
2	DIRT ROAD	5025.0'	0'	NONE	0'	NONE	9.3'	NONE	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	0'	NONE	0'	NONE	3.3'	NONE	TO REMAIN
4	POWER POLE	5067.9'	0'	NONE	8.1'	NONE	26.1'	NONE	TO BE RELOCATED
5	POWER POLE	5065.9'	0'	NONE	6.1'	NONE	24.1'	NONE	TO BE RELOCATED
6	POWER POLE	5063.9'	0'	NONE	4.1'	NONE	22.1'	2.2'	TO BE RELOCATED
7	POWER POLE	5061.9'	0'	NONE	2.1'	NONE	20.1'	0.0'	TO BE RELOCATED
8	ROAD	5034.0'	0'	NONE	0'	NONE	0.0'	NONE	TO REMAIN
9	POWER POLE	5076.4'	0'	NONE	1.9'	NONE	19.9'	NONE	TO BE RELOCATED
10	POWER POLE	5076.4'	0'	NONE	0'	NONE	17.5'	NONE	TO BE RELOCATED
11	POWER POLE	5073.4'	0'	NONE	0'	NONE	11.7'	NONE	TO BE RELOCATED
12	POWER POLE	5076.4'	0'	NONE	0'	NONE	11.5'	NONE	TO BE RELOCATED
13	POWER POLE	5076.0'	0'	NONE	0'	NONE	8.2'	NONE	TO BE RELOCATED
14	POWER POLE	5076.0'	0'	NONE	0'	NONE	5.5'	NONE	TO BE RELOCATED

NOTE: 15' ADDED TO ROAD ELEVATIONS TO DETERMINE OBSTRUCTION PENETRATION.

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Horizontal coordinate data in NAD83, vertical data is NAVD88.
3. Threshold siting surface criteria standards determined by FAA Advisory Circular 150/5300-13, *Airport Design*, Change 15, Appendix 2, Table A2-1.

NEPHI MUNICIPAL AIRPORT

Nephi City, Utah

INNER PORTION OF THE APPROACH SURFACE

RUNWAY 35 (PROFILE VIEW)

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DATE
AUGUST 2011

SCALE
1" = 2000'

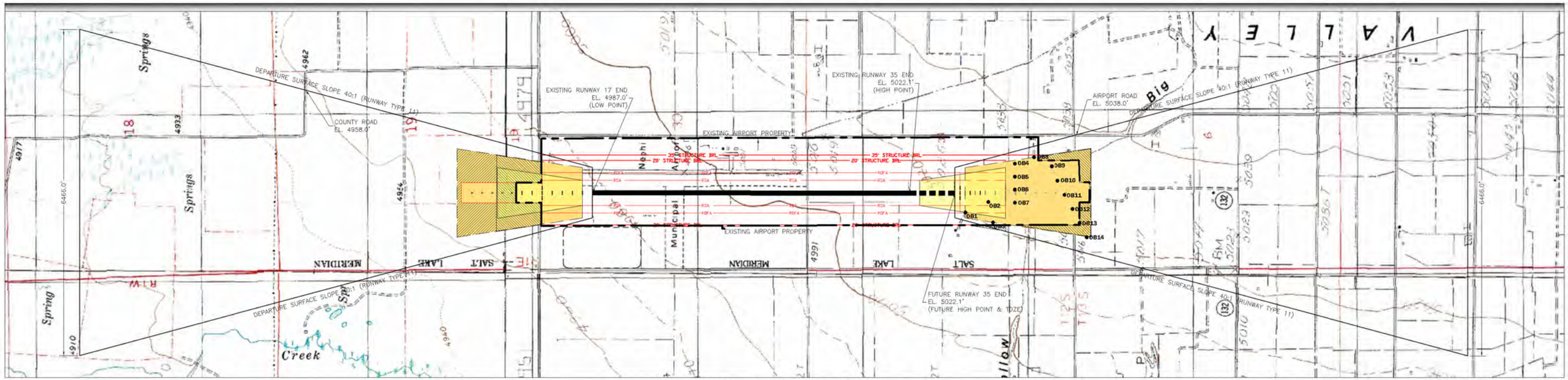
SHEET NO.
10 OF 14

Figure E10 **Inner Portion of the Approach Surface - Runway 35 Profile View**

Departure Surface Plans

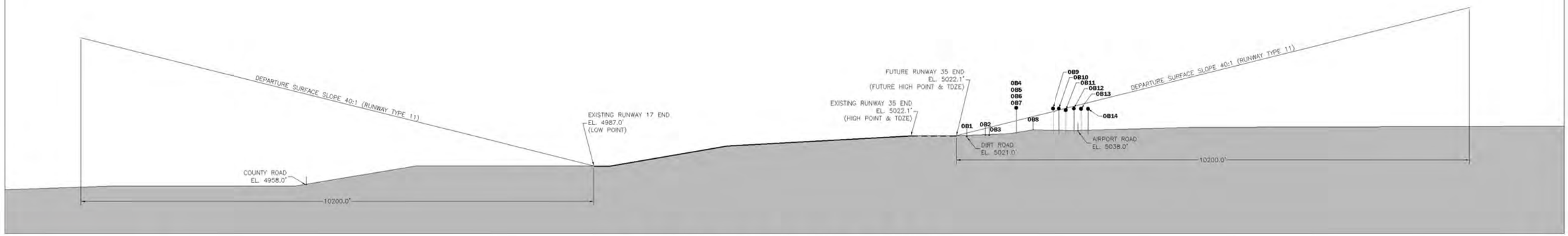
In addition to the *Inner Portion of the Approach Surface Drawings* that were previously described, a departure surface plan has been developed to illustrate the dimensions and slope of the departure surface used to establish the departure end of runway (DER). According to Appendix 2 information presented in AC 150/5300-13, for runways providing instrument departure capability to general aviation aircraft, no object should penetrate a surface beginning at the elevation of the runway at the DER or end of the clearway, whichever is greater, that slopes at a 40:1 gradient. Penetrations by existing obstacles of 35 feet or less do not require TODA reduction or other mitigations; however, they may affect new or existing departure procedures.

The *Departure Surface Drawing* that is depicted in Figure E11 provides a large-scale view with both plan and profile delineations, which reflect the ultimate planned runway length, along with the ultimate planned departure surface extending from each runway end. According to the application of these departure surface criterion, 14 obstructions were identified (ten power poles and four surface penetrations by one road) that will be evaluated by the FAA through the airspace review process (i.e., an aeronautical study). Regarding the disposition of these obstructions, it is likely that the power poles and the dirt road would be recommended for relocation.



DEPARTURE SURFACES - PLAN VIEW

1" = 1000'



RUNWAY 17/35 DEPARTURE SURFACE - PROFILE VIEW

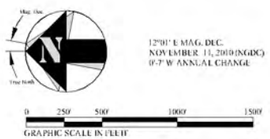
1" = 1000' HORIZONTALLY
1" = 100' VERTICALLY

OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PENETRATION	SURFACE	DISPOSITION
1	DIRT ROAD	5021.0'	15'	35 DEPARTURE	TO BE RELOCATED
2	DIRT ROAD	5025.0'	1.4'	35 DEPARTURE	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	-3.9'	35 DEPARTURE	TO REMAIN
4	POWER POLE	5067.9'	16.1'	35 DEPARTURE	TO BE RELOCATED
5	POWER POLE	5065.9'	14.1'	35 DEPARTURE	TO BE RELOCATED
6	POWER POLE	5063.9'	12.1'	35 DEPARTURE	TO BE RELOCATED
7	POWER POLE	5061.9'	10.1'	35 DEPARTURE	TO BE RELOCATED
8	ROAD	5034.0'	-12.2'	35 DEPARTURE	TO REMAIN
9	POWER POLE	5076.4'	6.4'	35 DEPARTURE	TO BE RELOCATED
10	POWER POLE	5076.4'	3.3'	35 DEPARTURE	TO BE RELOCATED
11	POWER POLE	5073.4'	-5.1'	35 DEPARTURE	TO BE RELOCATED
12	POWER POLE	5076.4'	-4.2'	35 DEPARTURE	TO BE RELOCATED
13	POWER POLE	5076.0'	-8.1'	35 DEPARTURE	TO BE RELOCATED
14	POWER POLE	5076.0'	-11.6'	35 DEPARTURE	TO BE RELOCATED
	NO OBSTRUCTIONS TO RUNWAY 17				

NOTE: 15' ADDED TO ROAD ELEVATIONS TO DETERMINE OBSTRUCTION PENETRATION.

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.



DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
RUNWAY PROTECTION ZONE		
BUILDING RESTRICTION LINE	BRL	BRL
RUNWAY SAFETY AREA	RSA	RSA (F)
RUNWAY OBJECT FREE AREA	ROFA	ROFA (F)
AVIGATION EASEMENT		

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Horizontal coordinate data in NAD83, vertical data is NAVD88.
3. Departure surfaces criteria standards determined by FAA Advisory Circular 150/5300-13, *Airport Design*, Change 15, Appendix 2, Table A2-1.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

DEPARTURE SURFACE DRAWING

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DATE
AUGUST 2011

SCALE
VARIES

SHEET NO.
11 OF 14

Figure E11 **Departure Surface Drawing**

Terminal Area Plan

Based upon input received from the Airport Sponsor, and the projected aircraft storage improvements that were identified in the *Aviation Activity Forecasts* chapter, the development recommendations for the existing/expanded terminal area (i.e., the hangar, apron, and access taxiway improvements) are presented in the following text and depicted in the following illustration, *TERMINAL AREA PLAN*.

Aircraft Storage.

- **Infill Hangar Development:** Promote new hangar construction within existing undeveloped or redeveloped lots located along the existing flightline.
- **Hangar Expansion Development:** Identify hangar expansion areas that can be efficiently developed, accommodate a variety of hangar types, and minimize new infrastructure development.
- **BLM SEAT Firefighting Base:** Identify a future development site to relocate existing storage tanks and accommodate expanded/segregated support facilities.
- **Aircraft Tiedown Positions:** Identify the expansion of existing aircraft tiedown apron that can be developed as needed throughout the planning period.

Airside Access.

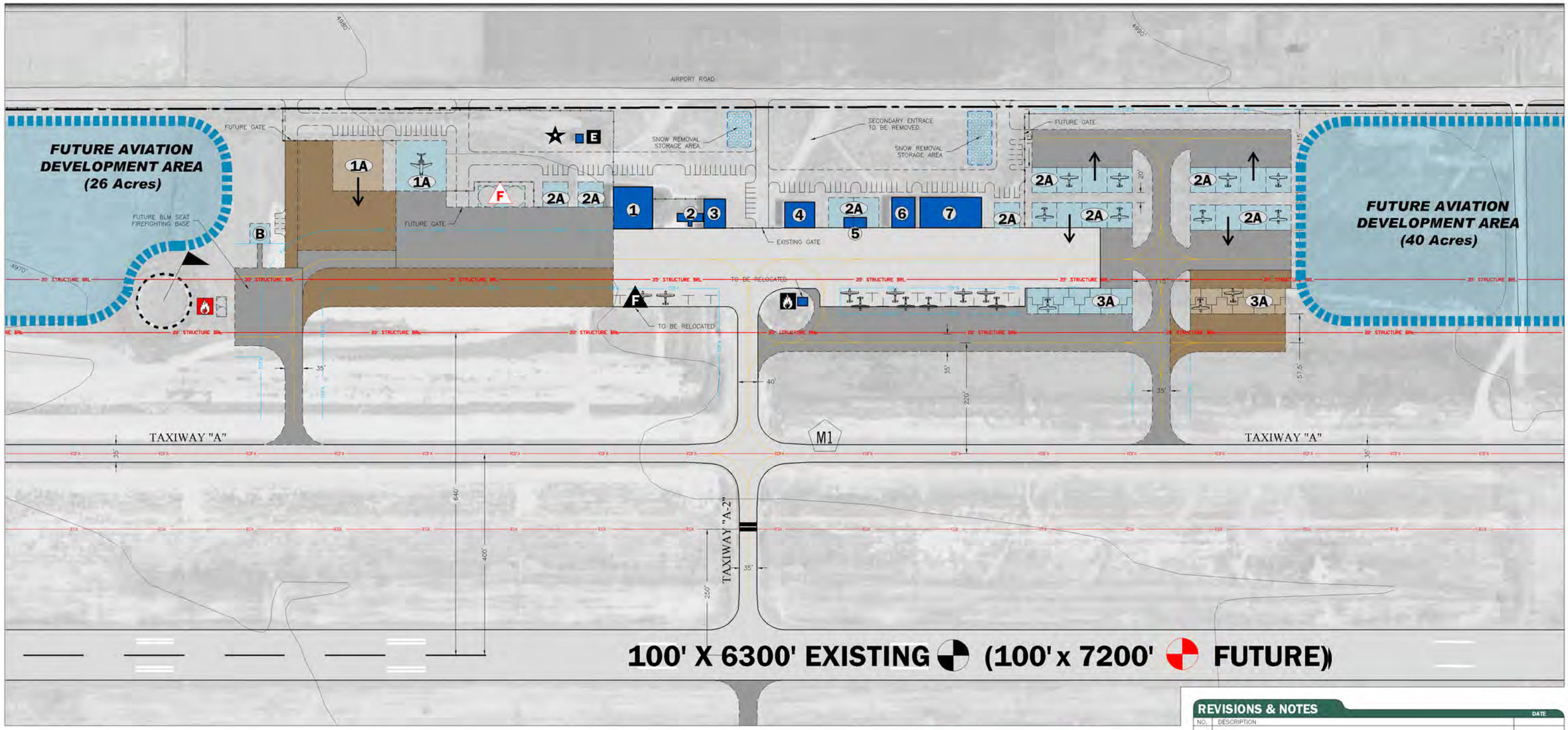
- **Connector Taxiway Development:** Identify locations for new connector taxiway construction that links the existing parallel taxiway system to new hangar development areas.
- **Partial Parallel Taxiway Development:** Provide for the future development of a partial parallel taxiway system to facilitate the movement of additional aircraft through the planning period.

Landside Access.

- **Access Roadway & Parking Development:** Provide direct roadway access and auto parking to all hangar facilities.
- **Security Fencing and Controlled Access Gates:** Modify/expand existing security fencing and provide new controlled access gates to serve future hangar expansion areas.

Support Facilities.

- **Fuel Farm:** Identify future development site for relocation of existing fuel storage and dispensing facilities.
- **Snow Removal Storage:** Identify landside locations for snow removal storage.
- **Utilities/Infrastructure:** Utility corridors will be identified within the Airport's landside development area, Nephi City water supply lines will be extended to airport property for distribution, and sanitary sewer connections will be established for airport tenants.



12°01' E MAG. DEC.
NOVEMBER 11, 2010 (NGDC)
0.2° W ANNUAL CHANGE

0 50' 100' 200' 300'
GRAPHIC SCALE IN FEET

EXISTING BUILDINGS

NO.	DESCRIPTION	TOP ELEVATION
1	FBO/CORPORATE HANGAR	---
2	PILOTS LOUNGE/OFFICE	5025.9'
3	AIRPORT MAINTENANCE HANGAR	---
4	EXECUTIVE HANGAR	5024.0'
5	EXECUTIVE HANGAR(TO BE REMOVED)	5020.2'
6	EXECUTIVE HANGAR	---
7	EXECUTIVE HANGAR	---

FUTURE BUILDINGS

NO.	DESCRIPTION	TOP ELEVATION
1A	FBO/MAINTENANCE HANGAR	---
2A	EXECUTIVE HANGAR	---
3A	T-HANGAR	---
B	BLM OFFICE	---

AIRPORT INFORMATION

	EXISTING	FUTURE
AIRPORT ELEVATION (AMSL) NAVD 88	5022.1'	SAME
AIRPORT REFERENCE POINT (ARP) NAD 83	N 39°44'11.70" W 111°52'12.20"	N 39°44'07.20" W 111°52'12.14"
MEAN MAX. TEMPERATURE (HOTTEST MONTH)	93°F	SAME
AIRPORT REFERENCE CODE	C-II	SAME
TAXIWAY LIGHTING	MITL	SAME
DESIGN AIRCRAFT	CESSNA CITATION X	SAME

DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
AIRPORT SECURITY FENCE	X	XX
AIRPORT BUILDINGS		
AIRFIELD PAVEMENT		
UTLIMATE AIRPORT BUILDINGS (Beyond 20 Years)		
ULTIMATE AIRFIELD PAVEMENT (Beyond 20 Years)		
PAVED ROADS		
RUNWAY PROTECTION ZONE		
AVIGATION EASEMENT		
BUILDING RESTRICTION LINE	BRL	BRL
RUNWAY SAFETY AREA	RSA	RSA (F)
RUNWAY OBJECT FREE AREA	ROFA	ROFA (F)
FUEL STORAGE AREA	A	A
AIRPORT BEACON		
LIGHTED WIND CONE & SEGMENTED CIRCLE		
WIND CONE		
PRECISION APPROACH PATH INDICATOR (PAPI)		
RUNWAY END IDENTIFIER LIGHTS (REIL)		
AIRPORT REFERENCE POINT (ARP)		
BLM STORAGE TANKS	A	A
ELECTRICAL VAULT	E	E

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

1. This drawing reflects planning standards specific to this airport and is not a product of detailed engineering design analysis. It is not intended to be used for construction documentation of navigation.
2. Aerial Photo by Aerial Data Service, INC. October 2007.
3. Elevation and Coordinate data from http://avnwww.jccbi.gov/pls/datasheet_prd/pkg_airport.PRO_AIRPORT_RUNWAY?v_cntl_num=26592. Horizontal coordinate data is NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

TERMINAL AREA PLAN

Barnard Dunkelberg & Company

TULSA
1616 East 15th Street
Tulsa, Oklahoma 74120
918.585.8884

DENVER
1743 Wazee Street, Suite 400
Denver, Colorado 80202
303.825.8884

DATE
AUGUST 2011

SCALE
1" = 200'

SHEET NO.
12 OF 14

Figure E12 **Terminal Area Plan**

Land Use Drawing

Figure E13, entitled *LAND USE DRAWING*, depicts existing and recommended use of all land within the ultimate airport property line. The purpose of the *Land Use Drawing* is to provide the Airport Sponsor with a plan for leasing revenue-producing areas on the Airport. All existing/future development within the bounds of the property owned by Nephi City will be compatible with the primary purpose and function of the Airport, and will generate lease revenue to support the operation of the Airport. Some areas of the facility are not likely to be provided with taxiway access; although, they can be utilized for non-aeronautical support activities that may not require airside access. The revenue-generating potential of these areas will vary based upon local traffic patterns and vehicular access. Specific proposals for future non-aeronautical uses will be subject to additional review and approval by the Federal Aviation Administration.

The *Land Use Drawing* also provides guidance to local authorities for establishing appropriate land use zoning in the vicinity of the Airport. As specified by the FAA, Grant Assurance #21, entitled *Compatible Land Use*, states that the Airport Sponsor "*will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft*". In addition, this Master Plan includes a Land Use Compatibility Planning element designed to update the County's existing height hazard zoning regulations and map to reflect the specified planning recommendations. These proposed revisions are presented in the following text.

Height Hazard Zoning Ordinance & Map Revisions

As noted in the *Inventory of Existing Conditions* chapter of this document, the existing height hazard zoning regulations and map for the Airport, as specified in the *Juab County Land Use Code*, is presented for reference in Appendix One of this document. Based upon the updated instrument approach planning recommendations for Runway 17 (identified as Runway 16 in the existing land use code), the following text edits are recommended to *Chapter 12-1-27 Airport Protection*:

Section 12-1-2703/pg. 166, 1st paragraph, 2nd sentence. Replace "Municipal Airport Zoning Map" with "Nephi Municipal Airport Zoning Map".

Section 12-1-2703/pgs. 166-167, 2nd paragraph. Replace all text as follows: "1. Runway Precision Instrument Approach Zone. An approach zone is established at the end of Runway 17 for landing and take-offs based on an ultimate 7,200 foot runway. The Precision Approach Zone shall have a width 1,000 feet at a distance of 200 feet beyond the end of the runway, widening hereafter uniformly to a width of 16,000 feet at a distance of 50,200 feet beyond the end of the runway, its centerline being the continuation of the centerline of the

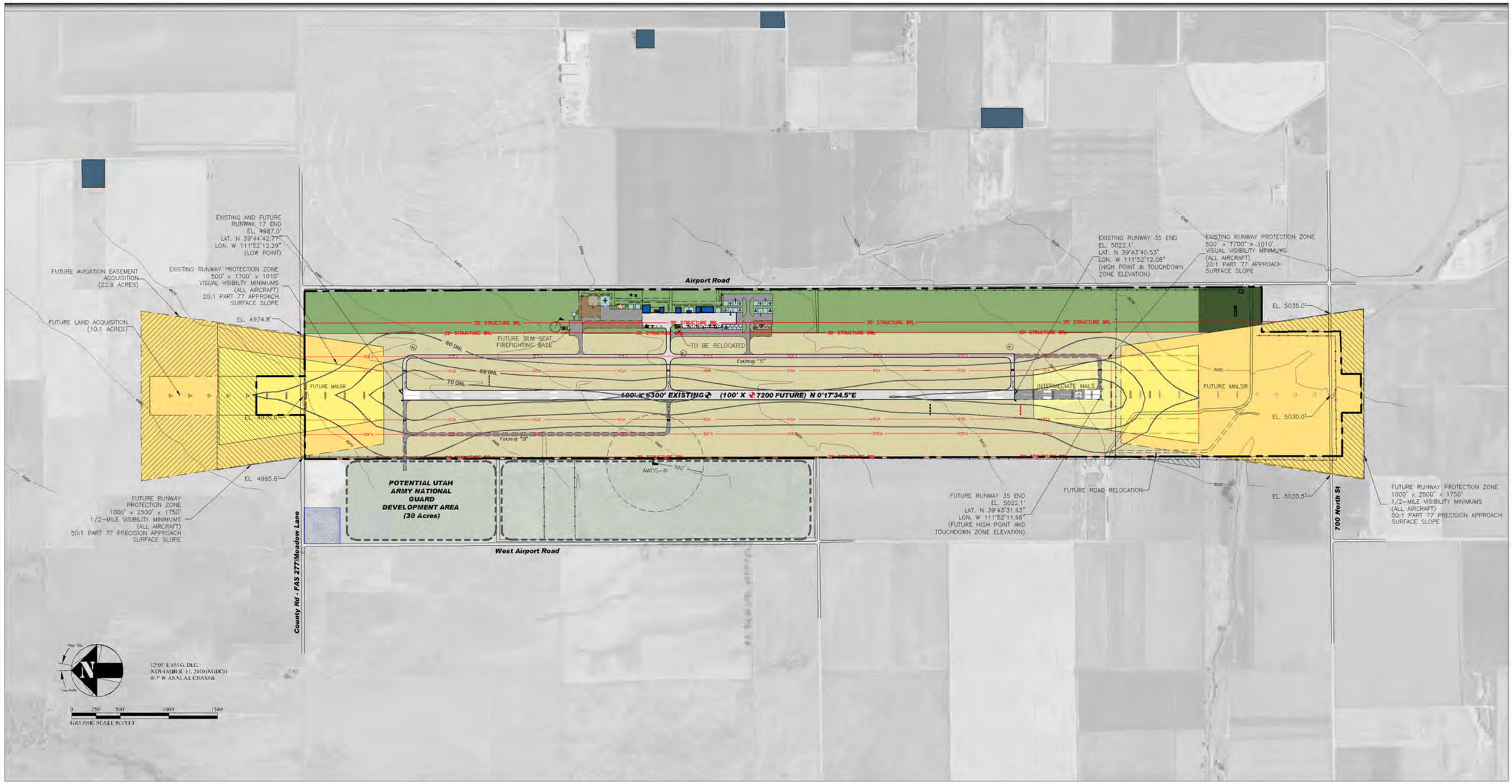
runway. The Approach Zone shall rise 1 foot in height for each 50 feet horizontal distance for the first 10,000 feet, beginning at a point 200 feet from and at the centerline elevation of the runway, then shall rise 1 foot in height for each 40 feet horizontal distance for an additional 40,000 feet, extending to a total distance of 50,200 feet from the end of the runway."

Section 12-1-2703/pg. 167, 2nd paragraph, 2nd sentence. Replace text as follows: "An approach zone is established at the end of Runway 35 for landing and take-offs based on an ultimate 7,200 foot runway."

Section 12-1-2704/pg. 168. Delete text and re-number as follows: Delete "1. Runway Non-Precision Approach Zone. 1 foot in height for each 34 feet horizontal distance beginning at a point 200 feet from the end of the runway and at the centerline elevation, extending a distance of 10,000 feet."

Section 12-1-2704/pgs. 168-169. Re-number remaining zones and specified height limitations (1-6), beginning with "Runway Precision Instrument Approach Zone" and ending with "Most Restrictive Limitation Prevails".

In addition, Figure E14, entitled *REVISED NEPHI MUNICIPAL AIRPORT ZONING MAP*, depicts the recommended updates to the existing height zoning boundaries as specified by this Master Plan.



RECOMMENDED LAND USE

- Aircraft Operations Protected Area
- Off-Airport Compatible Development
- Existing Airfield Pavement
- Aviation-Related/Compatible Development
- Aviation Development
- Runway Protection Zone
- Future Airfield Pavement
- Noise Countours
- Residential
- Agriculture/Open
- Storm Water Detention Basin

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

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2. Aerial Photo by Aerial Data Service, INC. October 2007.
3. Horizontal coordinate data in NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

LAND USE DRAWING

Barnard Dunkelberg & Company

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Denver, Colorado 80202
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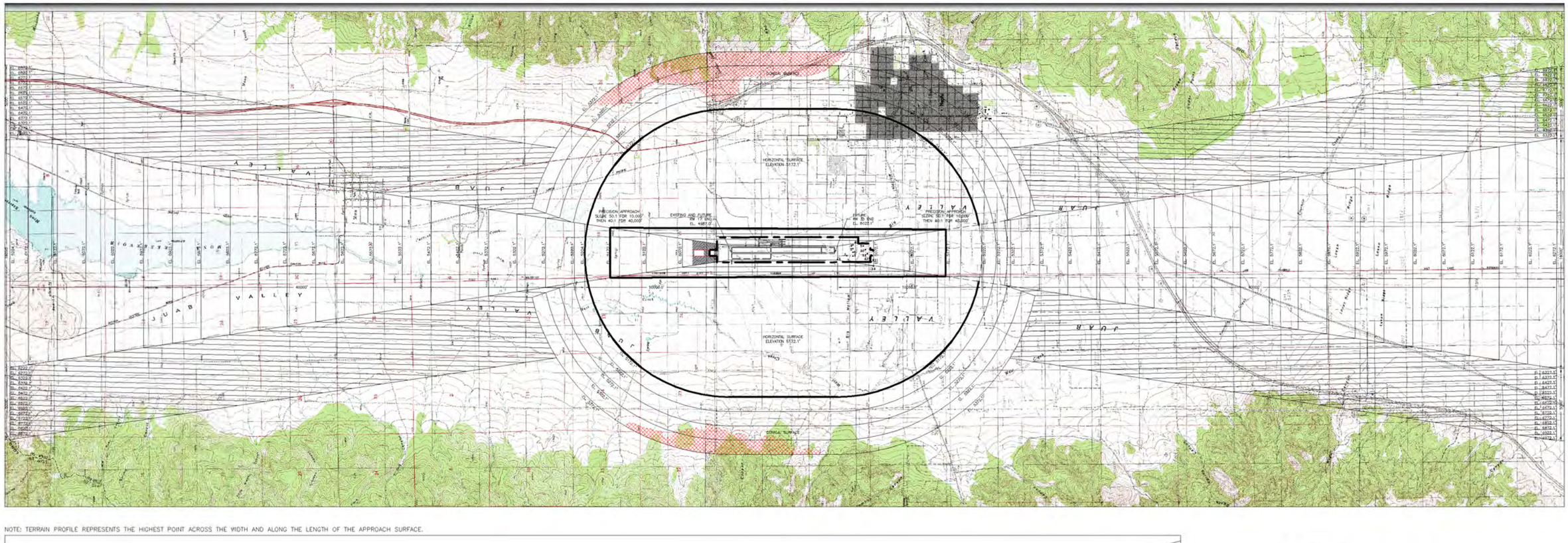
DATE
AUGUST 2011

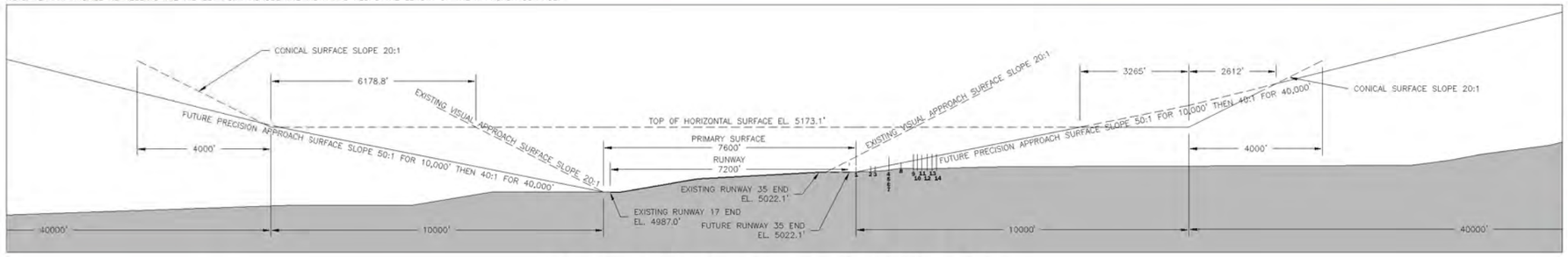
SCALE
1" = 500'

SHEET NO.
13 OF 14

Figure E13 **Land Use Drawing**

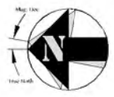


NOTE: TERRAIN PROFILE REPRESENTS THE HIGHEST POINT ACROSS THE WIDTH AND ALONG THE LENGTH OF THE APPROACH SURFACE.



Runway 17/35 - Approach Profile View

1" = 2000' HORIZONTALLY
1" = 200' VERTICALLY



12°01' E MAG DEC
NOVEMBER 11, 2010(NGDC)
0-7' W ANNUAL CHANGE

OBSTRUCTIONS

NO.	DESCRIPTION	ELEVATION	PENETRATION	SURFACE	DISPOSITION
1	DIRT ROAD	5021.0'	15'	PRIMARY	TO BE RELOCATED
2	DIRT ROAD	5025.0'	9.3'	35 APPROACH	TO BE RELOCATED
3	FUTURE ROAD (CONTROLLED ACCESS)	5022.0'	3.3'	35 APPROACH	TO REMAIN
4	POWER POLE	5067.9'	26.1'	35 APPROACH	TO BE RELOCATED
5	POWER POLE	5065.9'	24.1'	35 APPROACH	TO BE RELOCATED
6	POWER POLE	5063.9'	22.1'	35 APPROACH	TO BE RELOCATED
7	POWER POLE	5061.9'	20.1'	35 APPROACH	TO BE RELOCATED
8	ROAD	5034.0'	0.0'	35 APPROACH	TO REMAIN
9	POWER POLE	5076.4'	19.9'	35 APPROACH	TO BE RELOCATED
10	POWER POLE	5076.4'	17.5'	35 APPROACH	TO BE RELOCATED
11	POWER POLE	5073.4'	11.7'	35 APPROACH	TO BE RELOCATED
12	POWER POLE	5076.4'	11.5'	35 APPROACH	TO BE RELOCATED
13	POWER POLE	5076.0'	8.2'	35 APPROACH	TO BE RELOCATED
14	POWER POLE	5076.0'	5.5'	35 APPROACH	TO BE RELOCATED

SOURCE: PRIOR ALP, BARNARD DUNKELBERG, 1995.
NOTE: SEE INNER PORTION OF THE APPROACH SURFACE – RUNWAY 35 DRAWING FOR CLOSE-IN OBSTRUCTIONS.

DRAWING LEGEND

TERRAIN OBSTRUCTION	

REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

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NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

HEIGHT ZONING MAP
PLAN AND PROFILE VIEW

Barnard Dunkelberg & Company
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DENVER
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DATE
AUGUST 2011

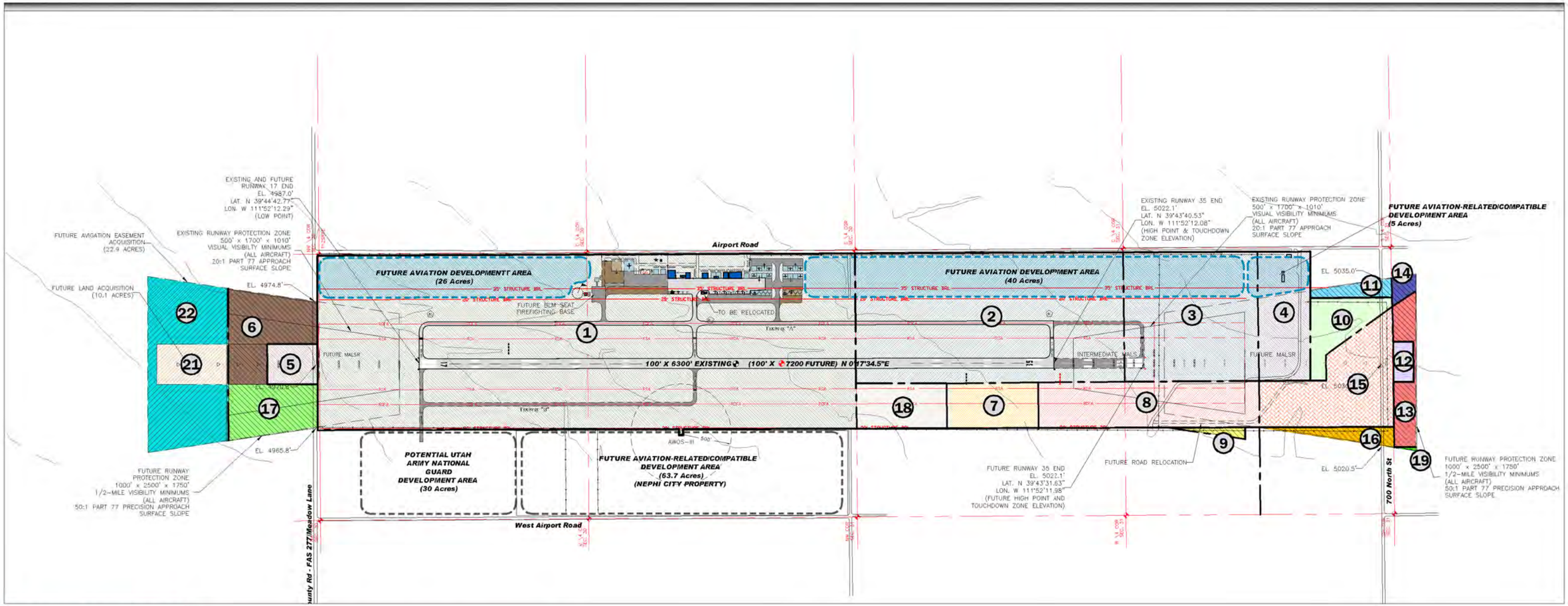
SCALE
VARIES

SHEET NO.
1 OF 1

Figure E14 **Revised Nephi Municipal Airport Zoning Map**

Airport Property Map

The *AIRPORT PROPERTY MAP*, which is presented on Figure E15, indicates how various tracts of land within the airport boundaries were acquired (e.g., federal funds, surplus property, local funds, etc.). The purpose of the drawing is to provide documentation of the current and future aeronautical use of land acquired with federal funds. According to existing property records, there is a total of 554.76 acres of fee simple property, and 37.67 acres in avigation easements that are owned and controlled by Nephi City. It should also be noted that the Airport is planning to acquire approximately 10.1 acres of property for the future visual approach aid (MALSR) to Runway 17, and approximately 22.9 acres in fee or easement to obtain full control of the future Runway 17 RPZs.



ON-AIRPORT PROPERTY DATA

PARCEL #		PREVIOUS OWNER	BOOK & PAGE	RECORDED DATE	DOCUMENT	ENTRY #	APPROX. ACRES	FEDERAL PROJECT	REMARKS
		Present Owner Nephi City Corp. by the following Deeds:							
1		Vaughn & Vera Paxman, Clarence & Mildred Paxman	Bk.127 Pg.285	Feb. 04 1944	Warranty Deed	71018	93.2		
1		V. A. Beck & Ida W. Beck	Bk.134 Pg.597	Mar. 30 1948	Quit Claim Deed	76924	–		
1		Clarence Paxman	Bk.136 Pg.11	Apr. 05 1948	Court Order	76939	–		
1		J. Earl & Nora Reid	Bk.127 Pg.287	Feb. 25 1944	Warranty Deed	71024	26.3		
1		F.C. & Jennie Chapman	Bk.127 Pg.348	May. 10 1944	Warranty Deed	71298	13.5		
1		Jane Bean	Bk.127 Pg.408	Jul. 20 1944	Warranty Deed	71664	40		
1		Federal Land Bank	Bk.127 Pg.416	Jul. 29 1944	Quit Claim Deed	71693	40		
1		Lusia Cutler & Florence Cutler, George H. & Marie C. Cutler	Bk.127 Pg.417	Jul. 29 1944	Warranty Deed	71694	–		
1		Jane Bean	Bk.127 Pg.427	Aug. 19 1944	Quit Claim Deed	71733	–		
1		Leland & Helen Fitzgerald	Bk.173 Pg.256	Jan. 03 1957	Quit Claim Deed	94756	–		
1		Dudley & Fawn Bray	Bk.173 Pg.257	Jan. 03 1957	Quit Claim Deed	94757	–		
2		Blake & Susan Garrett	Bk.428 Pg.65	Oct. 09 2001	Warranty Deed	225202	80.98	A.I.P. 3-49-0023-02	XB-2037
3		Blake & Susan Garrett	Bk.428 Pg.65	Oct. 09 2001	Warranty Deed	225202	39.49		XB-2038
4		Blake & Susan Garrett	Bk.428 Pg.65	Oct. 09 2001	Warranty Deed	225202	16.69		XB-2040
5		Roscoe R. Garrett	Bk.428 Pg.341	Oct. 18 2001	Warranty Deed	225302	4.98		XB-1915
6	Easement	Roscoe R. Garrett	Bk.428 Pg.342	Oct. 18 2001	Avigation Easement	225303	14.22		XB-1915
7		Roscoe R. Garrett	Bk.428 Pg.341	Oct. 18 2001	Warranty Deed	225302	9.30		XB-2035
8		R. Roscoe Garrett and Ellen A. Garrett Family L.C.	Bk.428 Pg.346	Oct. 18 2001	Warranty Deed	225304	22.93		XB-2036
9	Easement	R. Roscoe Garrett and Ellen A. Garrett Family L.C.	Bk.428 Pg.348	Oct. 18 2001	Avigation Easement	225305	1.01		XB-2036
10		Ellen A. Garrett Family L.C.	Bk.427 Pg.867	Oct. 02 2001	Warranty Deed	225139	7.82		XB-2041
11	Easement	Ellen A. Garrett Family L.C.	Bk.427 Pg.868	Oct. 02 2001	Avigation Easement	225140	2.57		XB-2041
12		Wesley A. & Gayle W. Lynn	Bk.417 Pg.158	Nov. 22 2000	Warranty Deed	222157	1.84		XB-2031
13	Easement	Wesley A. & Gayle W. Lynn	Bk.417 Pg.159	Nov. 22 2000	Avigation Easement	222158	6.02		XB-2031
14	Easement	Jarrett Land & Livestock	Bk.438 Pg.150	Jul. 22 2002	Avigation Easement	227975	1.21		XB-2294
15		McPherson Ranch Ltd.	Bk.436 Pg.216	May. 24 2002	Warranty Deed	227321	21.67		XB-2039
16	Easement	McPherson Ranch Ltd.	Bk.436 Pg.228	May. 24 2002	Avigation Easement	227329	3.11		XB-2039
17	Easement	McPherson Ranch Ltd.	Bk.436 Pg.223	May. 24 2002	Avigation Easement	227328	9.42		XB-1914
18		Gerald & Carol Cooper Trusts	Bk.427 Pg.589	Sep. 21 2001	Warranty Deed	225027	9.06		XB-2034
19	Easement	Larry A. & Christine G. Anderson	Bk.438 Pg.792	Aug. 09 2002	Avigation Easement	228163	0.11		XB-2301-22
						Total In-Fee	427.67	Acres	
						Total Avigation Easement	37.76	Acres	
21	FEE	Future Visual Approach Aid Acquisition			Warranty Deed		10.1		
22	Easement	Future RPZ Easement			Avigation Easement		22.9		

OFF-AIRPORT PROPERTY DATA

PARCEL #	PREVIOUS OWNER	BOOK & PAGE	RECORDED DATE	DOCUMENT	ENTRY #	APPROX. ACRES	FEDERAL PROJECT	REMARKS
	Present Owner Nephi City Corp. by the following Deeds:							
	Vaughn & Vera Paxman, Clarence & Mildred Paxman	Bk.127 Pg.285	Feb. 04 1944	Warranty Deed	71018	26.8		
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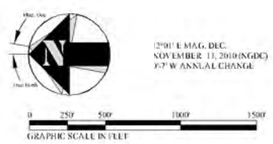
	Clarence Paxman	Bk.136 Pg.11	Apr. 05 1948	Court Order	76939	–		
	J. Earl & Nora Reid	Bk.127 Pg.287	Feb. 25 1944	Warranty Deed	71024	5.6		
	F.C. & Jennie Chapman	Bk.127 Pg.348	May. 10 1944	Warranty Deed	71298	26.5		
	George Sigler Administrator	Bk.127 Pg.417	Jul. 22 1944	Deed of Administrator	71695	40		
	UTAH STATE ARMORY BOARD	Bk.0532 Pg.1902	Apr. 22, 2009	Warranty Deed	256886	30		

LEGAL DESCRIPTION

Beginning at the north ¼ corner of Section 30 Township 12 South Range 1 East SLB&M; thence S0°05'35"E, 2,664.35 feet along the north/south center section line to the center ¼ corner of Section 30; thence S0°05'35"E, 2,664.45 feet along the north/south center section line to the south ¼ corner of Section 30; thence S0°01'47"E, 2,2661.28 feet along the north/south center section line of Section 31; thence S0°01'47"E, 1,850.64 feet along the north/south center section line of Section 31; thence N90°00'00"W, 508.94 feet; thence S0°17'35"W, 814.39 feet to a point on the south line of Section 31 Township 12 South Range 1 East SLB&M; thence S89°33'37"W, 440.05 feet along the south line of Section 31; thence S0°26'23"E, 200.00 feet; thence S89°33'37"W, 400.00 feet; thence N0°26'23"W, 200.00 feet, to a point on the south line of Section 31; thence S89°33'37"W, 440.05 feet along the south line of Section 31; thence N0°17'34"E, 5,330.87 feet to a point on the north line of Section 31; thence N0°17'35"E, 5,333.30 feet along a line offset 640.00 feet westerly from the center line of the proposed runway to a point on the north line of Section 30; thence N89°58'15"E, 405.68 feet along the north line of Section 30 to the northeast corner of the NW ¼ NW ¼ of Section 30; thence N0°05'10"E, 500.00 feet; thence N89°58'15"E, 433.33 feet; thence S0°01'45"E, 500.00 feet, to a point on the north line of Section 30; thence N89°58'15"E, 887.65 feet along the north line of Section 30 to the north ¼ corner of Section 30 and the point of beginning. Containing 428.40 acres more or less.

DRAWING LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
AIRPORT SECURITY FENCE	X	XX
AIRPORT BUILDINGS		
AIRFIELD PAVEMENT		
PAVED ROADS		
RUNWAY PROTECTION ZONE		RPZ
AVIGATION EASEMENT		
BUILDING RESTRICTION LINE	BRL	BRL
RUNWAY SAFETY AREA	RSA	RSA (F)
RUNWAY OBJECT FREE AREA	ROFA	ROFA (F)
FUEL STORAGE AREA	A	A
AIRPORT BEACON		
LIGHTED WIND CONE & SEGMENTED CIRCLE		
WIND CONE		
PRECISION APPROACH PATH INDICATOR (PAPI)		
RUNWAY END IDENTIFIER LIGHTS (REIL)		
AIRPORT REFERENCE POINT (ARP)		
BLM STORAGE TANKS		
ELECTRICAL VAULT	E	E



REVISIONS & NOTES

NO.	DESCRIPTION	DATE

NOTES:

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2. Aerial Photo by Aerial Data Service, INC. October 2007.
3. Horizontal coordinate data in NAD83, vertical data is NAVD88.

NEPHI MUNICIPAL AIRPORT
Nephi City, Utah

AIRPORT PROPERTY MAP

Barnard Dunkelberg & Company

TULSA
1616 East 15th Street
Tulsa, Oklahoma 74120
918.585.8844

DENVER
1743 Wazee Street, Suite 400
Denver, Colorado 80202
303.825.8844

DATE
AUGUST 2011

SCALE
1" = 400'

SHEET NO.
14 OF 14

Figure E15 **Airport Property Map**