

2.0 Alternatives

2.1 SUMMARY OF DRAFT EIS ALTERNATIVES

DesertXpress Enterprises, LLC proposes to construct and operate an interstate high-speed passenger train between Victorville, California and Las Vegas, Nevada along an approximately 200 mile corridor. The Draft EIS evaluated and analyzed action alternatives for the construction of a proposed steel wheel on steel rail high-speed train, and a “No Action” alternative. The Draft EIS analyzed the environmental effects of the action alternatives categorized as two primary routing alternatives for the proposed high-speed passenger rail system, which were identified by the project applicant and found to satisfy the project’s purpose and need as described in **Chapter 1.0, Purpose and Need**, of the Draft EIS. These were identified as Alternative A and Alternative B.

Alternative A was based primarily on a rail alignment in the I-15 freeway median.

Alternative B was based primarily on a rail alignment running alongside the I-15 freeway.

In addition, the Draft EIS examined a third alignment option within the Las Vegas metropolitan area (Option C).

The Draft EIS evaluated the routing alternatives along the nearly 200 mile corridor between Victorville and Las Vegas by dividing the route into seven segments. **Table S-2-1** summarizes the segments and alignment options the Draft EIS evaluated.

Table S-2-1 Summary of Routing Alternatives Evaluated in the Draft EIS

Segment	Alternative A	Alternative B	Other
1: Victorville to Lenwood	Segment 1: One routing alternative along the north/west side of I-15 corridor		NA
2: Lenwood to Yermo	Segment 2A/2B, 2A Joint alignment through Barstow, then about 1 mile north of I-15 to Yermo	Segment 2A/2B, 2B Joint alignment through Barstow, then adjacent to I-15 to Yermo	NA
3: Yermo to Mountain Pass	Segment 3A: Within I-15 median	Segment 3B: West of I-15, running alongside freeway	NA
4: Mountain Pass to Primm	Segment 4A: Includes approx. 2 mile portion of MNP, then east of I-15	Segment 4B: Through new tunnels in mountains northwest of I-15, through BLM-managed land	NA

Segment	Alternative A	Alternative B	Other
5: Primm to Sloan Road	Segment 5A: Within I-15 median	Segment 5B: Along east side of I-15	NA
6: Sloan Road to Las Vegas (Southern or Central A/B Stations) ¹	Segment 6A: Within I-15 median	Segment 6B: Varying from east to west side of I-15	Segment 6C: UPRR Corridor
7: West Twain Avenue to Downtown Station	Segment 7A: Within I-15 median	Segment 7B: West side of I-15	Segment 7C: UPRR Corridor

Source: CirclePoint, 2010.

In addition to the routing alternatives, the Draft EIS analyzed the environmental effects of several project station and maintenance facility site options identified by the project applicant:

Victorville passenger station: Two site options (Victorville Station Site 1 (VV1) and Victorville Station Site 2 (VV2)) immediately west of the I-15 freeway corridor.

Victorville Operations, Maintenance, and Storage Facility (OMSF): Two site options (OMSF 1 and OMSF 2) immediately west of the I-15 freeway corridor.

Maintenance of Way (MOW) Facility: One site option adjacent to the I-15 freeway corridor near the community of Baker.

Las Vegas area Maintenance and Storage Facility (MSF): Three site options (Sloan Road MSF, Wigwam Avenue MSF, and Robindale Avenue MSF) adjacent to the I-15 freeway corridor.

Las Vegas area passenger station: Four site options (Southern Station, Central Station A, Central Station B, and Downtown Station) in Clark County and the City of Las Vegas.

The Draft EIS also evaluated the environmental effects of two locomotive technology options proposed by the project applicant: 1) a diesel-electric multiple unit technology (DEMU); and 2) an electrical multiple unit technology (EMU).

Refer to **Chapter 2.0, Alternatives**, of the Draft EIS for a full discussion of the action alternatives evaluated in the Draft EIS.

2.2 PROPOSED PROJECT MODIFICATIONS AND ADDITIONS

Subsequent to the publication of the Draft EIS, the project applicant proposed several project modifications and additions to address substantive comments received during public and agency review of the Draft EIS and to reduce or avoid significant environmental effects. This Supplemental Draft EIS analyzes the potential environmental

¹ If Option C is selected for Segment 6, the terminus would be either Central Station A or B or the Downtown Station, via Segment 7A, 7B or Option C. Segment 6 Option C would not terminate at the Southern Station.

effects of these proposed project modifications and additions. **Figures S-2-1 through S-2-5** show the locations of the proposed project modifications and additions.

2.2.1 VICTORVILLE STATION SITE 3

The Applicant has proposed an additional passenger station site option for the Victorville area near the I-15 /Dale Evans Parkway interchange. The Victorville station would offer train ticketing, baggage handling, and hotel room check-in for Las Vegas resorts. The proposed train station would be compatible with land use plans already proposed by the City of Victorville for mixed-use development served by local transit, and with highway access.

The Draft EIS concluded that VV1 would result in adverse traffic impacts at local intersections and would significantly contribute to future adverse cumulative effects, even with the implementation of mitigation measures. The Draft EIS also concluded that VV2 would result in potentially significant effects to existing intersections, but that mitigation measures (included in the Draft EIS) could reduce the significance of these impacts such that affected intersections would operate at acceptable service levels. For more information, please refer to the Draft EIS, **Section 3.5, Traffic and Transportation**.

In response to these potential effects, the Applicant has proposed a third Victorville Station site (VV3). **Figure S-2-6** shows the location of VV3 on the west side of the I-15 freeway near Dale Evans Parkway, immediately north of OMSF 2. VV3 is about six miles north of VV1 and 4.5 miles north of VV2.

The Applicant has proposed two options for the surface parking provided at the station. Option A (or VV3A) includes approximately 15,000 surface parking spaces to the south and east of the station building, beneath electrical utility lines located in an easement owned by the Los Angeles Department of Water and Power (LADWP). This option would require an agreement between the Applicant and LADWP to allow parking within LADWP's utility easement. Because such an agreement is not currently in place, the applicant has also proposed a site plan with a different surface parking option. Option B (VV3B) would place approximately 12,700 surface parking spaces in areas north and west of the station building. **Figure S-2-6** depicts the site plans for VV3A and VV3B.

The railroad tracks and the station building are proposed for the exact same location for both surface parking options. In addition to the surface parking spaces, under both options, the station building would include structured parking for approximately 1,650 cars.

VV3A would have a station area footprint of about 205 acres, inclusive of tail tracks. In comparison, VV3B would encompass approximately 218 acres. Either of the VV3 site options would have a larger footprint than VV1 or VV2, which are each about 100 acres in area).

2.2.2 OMSF 2 REDUCED SITE SIZE

The Applicant has proposed a new site footprint for OMSF 2. The OMSF 2 facility would include a train washing facility, repair shop, parts storage, operations control center, and a fueling station (for the DEMU option only). Approximately 400 employees would be employed at the facility.

The Draft EIS analyzed the impacts of an approximately 260 acre site envelope for the OMSF 2 facility, but noted that the final footprint of the OMSF facilities were expected to be notably smaller (see **Section 2.4.9.3** of the DEIS).

Since publication of the Draft EIS the applicant has conducted further engineering studies and has proposed a reduced footprint for OMSF 2 that now encompasses approximately 68 acres. **Figure S-2-1** depicts OMSF 2 at its reduced size. Proposed operations at the OMSF 2 site would not change from those described in the Draft EIS. Refer to **Appendix A-4** of the Draft EIS for a detailed layout of OMSF 2.

2.2.3 SEGMENT 2C

In response to comments by the City of Barstow, the Applicant has proposed a new alignment following the I-15 freeway through Barstow, referred to as Segment 2C. The Draft EIS analyzed a single routing option (Segment 2A/2B) between the cities of Lenwood and Barstow. **Section 1.7.1** of the Draft EIS discussed a possible additional routing option for Segment 2 that would follow the I-15 freeway median through the City of Barstow, including a possible station option in the vicinity of Lenwood Road. The Draft EIS did not, however, include full analysis of any such routing or station option, as the feasibility studies and detailed plans had not advanced enough by the time of Draft EIS publication. However, upon publication of Draft EIS, FRA mailed special notices to property owners along this corridor in an effort to seek comment and input about such an alternative if it were determined feasible. The notices advised that the analysis related to this corridor would be provided within subsequent environmental documentation, pending the outcome of the feasibility studies.

During the Draft EIS public review period (March 18, 2009 – May 22, 2009), the City of Barstow submitted comments requesting that Segment 2 be relocated to the I-15 corridor to avoid potential impacts to a planned industrial park in the Lenwood area.

In response, the Applicant completed a feasibility analysis and detailed plans for a rail alignment Segment 2C.

The applicant has proposed two alignment options for Segment 2C, both of which would be located within the I-15 freeway corridor.

- **Side Running (2C Side Running):** From the end of Segment 1 approximately 7 miles southwest of Lenwood, the 2C Side Running alignment would run along the north and west side of the I-15 freeway through Lenwood, central Barstow, and eastward to Yermo, where it would join Segment 3.
- **Median Option (2C Median):** From the end of Segment 1, this alignment would run along the north and west side of the I-15 freeway through Lenwood. As the alignment approaches Central Barstow it would transition into the I-15 freeway median for approximately 3 miles from H Street to East Main Street. At East Main Street, the alignment would transition back to the north and west side of the I-15 freeway and then connect with Segment 3.

Figures S-2-2 and **S-2-7** depict the 2C Side Running and Median options. **Appendix S-A-1** includes detailed plans of the Segment 2C alignment options.

Within Central Barstow, both alignment options would be constructed on elevated structures and would cross over local interchanges and overpasses. Implementation of either Segment 2C alignment would result in a 12 mile reduction in the length of Segment 1 because the portion of Segment 1 that extends away from the I-15 corridor to travel around the west and northern edges of Barstow would not be required. Both Segment 2C alignments would follow a more direct route relative to Segment 2A and Segment 2B.

Either alignment option for Segment 2C would also entail one temporary construction area (TCA) along the proposed alignment for construction staging equipment. TCA 2C1 would have a total area of 1 acre and would be located between the cities of Lenwood and Barstow. This Supplemental Draft EIS examines potential effects of the TCA as part of the alignment options.

The Applicant has not proposed a Barstow station site and FRA has not included analysis of one as ridership projections indicated that the anticipated number of passengers boarding at a potential Barstow station would be insufficient to support a station. Moreover, VV1, VV2, and VV3 are all located within 25 miles of Barstow, and thus in reasonable proximity to serve any demand originating from the Barstow area.

2.2.4 SEGMENT 4C

The Applicant has proposed a modified Segment 4 rail alignment to avoid impacts identified in the Draft EIS associated with Segments 4A and 4B. The Draft EIS identified a 1.55 mile portion of Segment 4A which traversed the Mojave National Preserve (MNP) near Nipton Road as well as a portion of the Ivanpah Desert Wildlife Management Area (Ivanpah DWMA), an important resource area for the desert tortoise. The Draft EIS identified that Segment 4B would conflict with a planned solar power project located to the west of Ivanpah Dry Lake.

Figure S-2-3 shows Segment 4C, which the Applicant proposed in response to these impacts. Segment 4C would be approximately 20.7 miles long, or about 7 miles longer than Segment 4A and 8 miles longer than Segment 4B. The west end of Segment 4C would follow the same alignment as Segment 4B, as it moves away from the I-15 freeway corridor and through a series of three tunnels to be constructed through the Clark Mountains. Segment 4C would then travel north of the planned solar energy projects and the Ivanpah Dry Lake bed before connecting back to the I-15 freeway corridor in the vicinity of Primm, NV.

Segment 4C would connect with Segment 5 north of Primm, NV, where the rail alignment would cross over from the west side of I-15 to the east side of I-15 on an aerial structure. (**Figures S-2-10** and **S-2-11** show the cross sections where Segment 4C would connect with Segment 5 and cross over the I-15 freeway corridor.)

Segment 4C would also require five additional TCAs for construction staging equipment. TCA 4C1 through TCA 4C5 would range in size from 1 to 9.7 acres. **Figure S-2-3** shows the locations of these new temporary construction areas.

Appendix S-A-2 includes detailed plans of the Segment 4C alignment, including TCAs.

2.2.5 RELOCATED SLOAN MSF SITE

The Applicant has proposed a modified location for the Sloan Road Maintenance and Storage Facility (Sloan Road MSF) in response to comments on the Draft EIS. During public review of the Draft EIS, the Clark County Department of Aviation (CCDOA) submitted comments indicating that the Sloan Road MSF would be in direct conflict with the location of a proposed “super arterial” roadway that would provide future vehicle access to the planned Southern Nevada Supplemental Airport (SNSA) to be located north of Primm, NV.

In response to this comment, the Applicant has proposed a modified location for this facility approximately 9 miles south of Sloan Road and approximately 2 miles south of the Sloan Road MSF analyzed in the Draft EIS (see **Figure S-2-4**). Similar to the Sloan Road MSF, the Relocated Sloan MSF (RSMSF) would include a utility corridor (also shown on **Figure S-2-4**) that would connect an electrical substation (incorporated within the RSMSF site) to electrical transmission lines to the west under the EMU technology option.

The RSMSF would be located on the east side of the I-15 freeway corridor. The associated proposed utility corridor would cross over the I-15 freeway and continue approximately 1 mile to the west in order to connect with an existing Nevada Energy electric transmission line. **Appendix S-A-3** includes detailed drawings of the RSMSF site, which would also serve as an additional temporary construction area for the project overall.

2.2.6 FRIAS SUBSTATION SITE

The Applicant has proposed an additional electrical substation site, the Frias Substation, in order to provide electrical power in the event the EMU technology is selected.

The Draft EIS included three MSF sites (Wigwam, Robindale, and Sloan) of which, only the Sloan site included an electrical substation and utility corridor that would provide power for the EMU technology option. No such substation and utility corridor was provided for the Wigwam or Robindale sites. The Applicant has added the Frias Substation to the project to serve the Wigwam or Robindale MSF sites under the EMU option.

Figure S-2-5 depicts the general location of the proposed Frias Substation site, which would be west of the I-15 freeway at the intersection of West Frias Avenue and South Dean Martin Drive in unincorporated Clark County. **Figure S-2-8** shows a detailed site plan.

The substation would be located immediately adjacent to an existing Nevada Energy electrical transmission line (the Arden-Tolson Transmission line) on undeveloped land in an area of sparse residential development and open lands.

Overhead electrical connections between the substation and the transmission line are included. The substation would be constructed on two separate sites: 1) a 3.2 acre substation on the west side of South Dean Martin Drive; and, 2) a 1.4 acre substation to the east side of South Dean Martin Drive. Other components of the Frias Substation include undergrounded 25 kilovolt feeder lines, which would connect to a new autotransformer that would be located immediately adjacent to the I-15 freeway. The autotransformer at Frias would be in addition to the 17 autotransformers identified in **Section 2.4.9.4** of the Draft EIS.

2.2.7 ALIGNMENT ADJUSTMENT AREAS

Following publication of the Draft EIS, the Applicant performed more detailed engineering studies which resulted in eight locations where the Alternative A and Alternative B rail alignments would be modified to improve operating characteristics, reduce or avoid environmental impacts identified in the Draft EIS, reduce project construction costs, or avoid potential conflicts with a constrained freeway right of way area. This Supplemental EIS refers to these eight locations of minor modifications (less than 400 feet) as Alignment Adjustment Areas (or AAAs). **Figures S-2-1** through **S-2-5** show AAA1 through AAA8. **Table S-2-2** summarizes each of the eight AAAs.

Table S-2-2 Summary of Alignment Modification Areas

Alignment Modification Area	DesertXpress Alignment	Location	Reason for Alignment Modification	Relevant Figure
1	Segments 2A/2B	Through Barstow, north of the Mojave River	Avoids developed properties, improves constructability of alignment	S-2-2
2	Segments 2A/2B	Through Barstow, north of the Mojave River	Improves constructability of alignment	S-2-2
3	Segment 3B	Southwest of Baker at Basin Road	Avoids known resource area	S-2-3
4	Segment 3B	Southwest of Baker	Avoids known resource area	S-2-3
5	Segment 3B	Southwest of Baker	Moves side-running alignment closer to I-15	S-2-3
6	Segment 3B	Southwest of Baker, near Mojave National Preserve	Moves side-running alignment closer to I-15	S-2-3
7	Segment 6B	East of Sloan	Moves alignment to edge of right-of-way to accommodate potential freeway widening project.	S-2-4
8	Segment 6B	From the Wigwam MSF site northerly to Las Vegas Central Station "B"	A 5 mile portion of this alignment would be shifted approximately 40 feet to the west; portions of this shifted alignment would be outside the I-15 right of way on lands adjacent to Industrial Road/Dean Martin Drive, owned by Clark County ; the shifted alignment would avoid potential conflicts with future improvements in the freeway corridor.	S-2-5

Source: CirclePoint, 2010.

Of particular note is AAA8 because of its 5-mile length. AAA8 shifts the alignment of Segment 6B approximately 40 feet to the west in unincorporated urban Clark County, between the Wigwam MSF and Central Station B. In doing so, portions of the alignment would be located outside the I-15 freeway right-of-way on right-of-way owned by Clark County in the following areas:

- Between the I-15/State Route 215 interchange and West Russell Road the alignment would be located on elevated structure along the shoulder of Industrial Road/Dean Martin Drive.

- Between West Russell Road and West Tropicana Avenue the alignment would be located on an elevated structure in the median of Industrial Road/Dean Martin Drive.
- Between West Tropicana Avenue and the Las Vegas Central Station B site the alignment would be located on an elevated structure along the shoulder of Industrial Road/Dean Martin Drive.

2.2.8 WIGWAM AVENUE MSF MODIFICATION

Near AAA8, the applicant has proposed a modification to the Wigwam Avenue Maintenance and Storage Facility (Wigwam MSF) that would reorient the tail tracks connecting the facility to enter/exit the MSF site from the south. The Draft EIS evaluated tail tracks into and out of the north of the MSF site. The size of the site itself is otherwise unchanged. **Figure S-2-5** shows the location of the Wigwam MSF site; **Appendix S-A-4** includes detailed facility plans.

2.2.9 PROFILE MODIFICATION

The Applicant has proposed a profile modification in Segment 3B near the Halloran Springs Road and I-15 interchange. **Figure S-2-3** shows the general location of this profile modification.

An approximately 1.3 mile portion of Segment 3B would be placed within a retained cut approximately 6 to 8 feet below the ground surface to reduce/avoid visual, noise, and vibration effects. The modification would also entail narrowing the rail alignment to approximately 41 feet in this area (as opposed to 60 feet in most locations). **Figure S-2-9** shows the modified cross section for the limited portion of Segment 3B.

2.3 NO ACTION ALTERNATIVE

Since publication of the Draft EIS, there have been several changes and updates to the No Action Alternative, including additional planned and programmed transportation improvements. Refer to **Section 2.1.3** of the Draft EIS for a full discussion of the No Action Alternative.

Consistent with the Draft EIS, the existing roadway conditions on I-15 from Victorville to Las Vegas are as follows:

- **Victorville to SR 58 (Barstow)** - Three lanes each way with a 4th southbound truck lane coming out of Barstow up to the summit;
- **SR-58 to I-40 (Barstow)** - Three lanes each way plus some auxiliary lanes,
- **I-40 to Baker** - Two lanes each way;
- **Baker to California/Nevada state line** - Two lanes each way with a truck lane northbound approaching Halloran Summit (~17 miles north of Baker) and southbound at Mountain Pass (~15 miles south of the state line);
- **California/Nevada state line to I-215** - Three southbound lanes and two northbound lanes, with an additional northbound lane currently being constructed;

- ***I-215 to Flamingo Road (Clark County)*** - Three lanes each way plus auxiliary lanes; and
- ***North of Flamingo Road (Clark County and City of Las Vegas)*** - Four lanes each way.

2.3.1 PLANNED AND PROGRAMMED TRANSPORTATION IMPROVEMENTS

Section 2.1.3.1 of the Draft EIS identified planned and programmed (funded) highway improvements along I-15 between Victorville and Las Vegas, by the California Department of Transportation (Caltrans) or the Nevada Department of Transportation (NDOT). Several additional planned and programmed transportation improvements have been identified since publication of the Draft EIS and are listed below. These improvements are anticipated to proceed with or without approval of the DesertXpress project. Since publication of the Draft EIS, some of the previously identified improvements have been completed. All of the planned and programmed improvements are identified below, along with their status as of August 2010.

Caltrans

- Widen the bridge crossing over the Mojave River in Victorville: Completed.
- Reconstruct the D Street, E Street, and South Stoddard Wells Road interchanges along I-15: Environmental review.
- Near Barstow, widen a 1-mile segment of I-15 to 6 lanes and reconstruct an I-15 interchange in Barstow. No start date at present.
- Add truck climbing lanes on I-15 in sections with steep grades. Completed east of Baker.
- High Desert Corridor roadway project, which would develop a new freeway/expressway from SR-14 to I-15: Preliminary design and environmental review.

NDOT

- “NEON” project: Preliminary engineering underway.
 - Reconstruct the I-15/Charleston interchange
 - Implement local access improvements
 - Add a High-Occupancy Vehicle (HOV) direct connector lane from US 95 to I-15.
- The “I-15 South” project: Preliminary engineering, right of way acquisition, and construction underway from between Silverado Boulevard and Tropicana Avenue (first phase of design-build project)²;
 - New flyover at Blue Diamond Boulevard, new overpasses at Sunset Road, Warm Springs Road, and Pebble Road
 - New interchanges on I-15 at:

² Project as a whole spans from Sloan Road in the south to Tropicana Avenue in the north.

- Bermuda Road
- Starr Avenue
- Cactus Road
- Widening of:
 - I-15 mainline from Sloan Road to Blue Diamond Road (6 lanes to 10 lanes)
 - Las Vegas Boulevard
- Reconstruct the Sloan Road and I-15 interchange.
- New sound barriers and other improvements long I-15 corridor
- Other New I-15 Interchanges:
 - At Milepost 3 (new interchange to serve future airport): preliminary engineering, right-of-way acquisition
- Other Road Widenings:
 - I-15 between Russell Road and Sahara Avenue: widen from 8 to 10 lanes (preliminary engineering and right-of-way acquisition)
 - I-15 between I-215 and I-515: widen from 10 to 14 lanes (preliminary engineering)

2.3.2 PLANNED BUT UNPROGRAMMED TRANSPORTATION IMPROVEMENTS

Section 2.1.3.2 of the Draft EIS identified several planned, but unprogrammed, transportation improvements. These improvements were understood to be in early planning phases and would be considered as part of the cumulative impact analysis. These projects are typically included in long-range transportation planning documents, (such as a Regional Transportation Plan or RTP or similar document), but are not funded in the current year (through a Regional Transportation Improvement Program or RTIP or similar).

Since publication of the Draft EIS, several additional projects within Clark County have been identified in regional transportation planning documents with a potential bearing on the DesertXpress project. These include two new roads, three road widening projects, and two other projects (Las Vegas intermodal terminal and high-occupancy toll lanes; each described below).

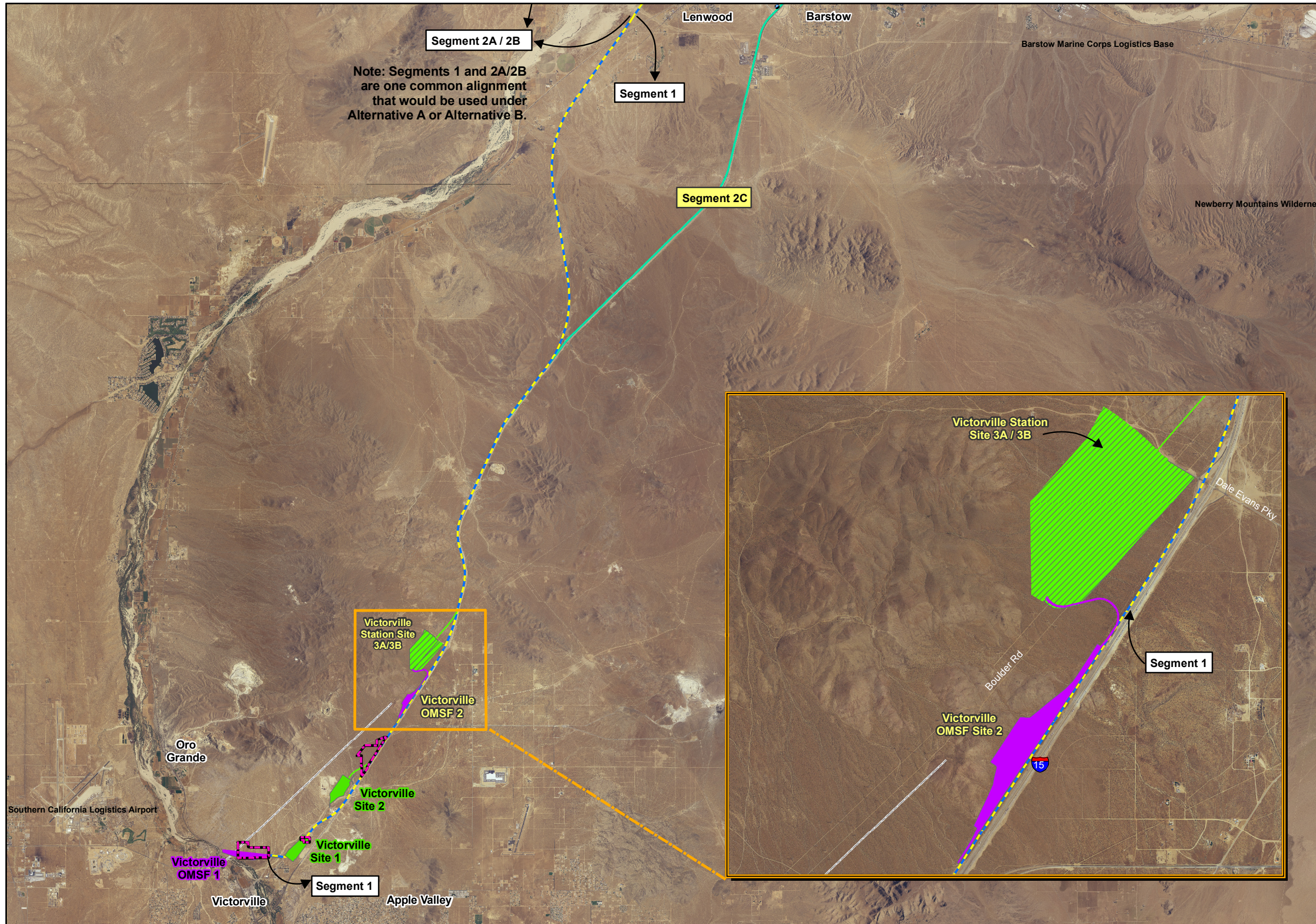
Victorville

- North Mojave area specific plan

Clark County

- Urban Resort Corridor Study (upgrades to I-15 and parallel roadways between I-215 and US-95)
- Supplemental Commercial Airport in Ivanpah Valley
- Southern Nevada Regional Heliport
- New roads:
 - Starr Avenue: construction of a 6 lane roadway from I-15 to St. Rose Parkway

- I-15 at I-215: construction of new direct connector high-occupancy vehicle ramps
- Road widening:
 - I-15 from California state line to Sloan Road: widen from 6 to 8 lanes
 - Dean Martin Drive: widen to 4 lanes for approximately 1 mile between Blue Diamond Road and Warm Springs Road
 - Tropicana Boulevard: add 4th westbound lane between Decatur Boulevard and Polaris Avenue
- Other projects:
 - Intermodal Transport Terminal near Downtown Las Vegas
 - Las Vegas Managed Lanes Demonstration Project (trial of high occupancy toll (HOT) lanes on I-15 from the intersection of I-215 in the south to north of Downtown Las Vegas, and beyond the proposed terminus of the DesertXpress project)

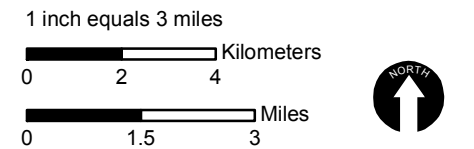


Note: Segments 1 and 2A/2B are one common alignment that would be used under Alternative A or Alternative B.

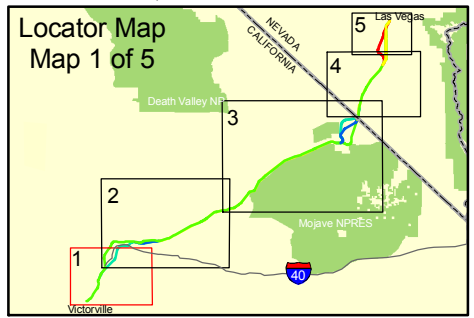
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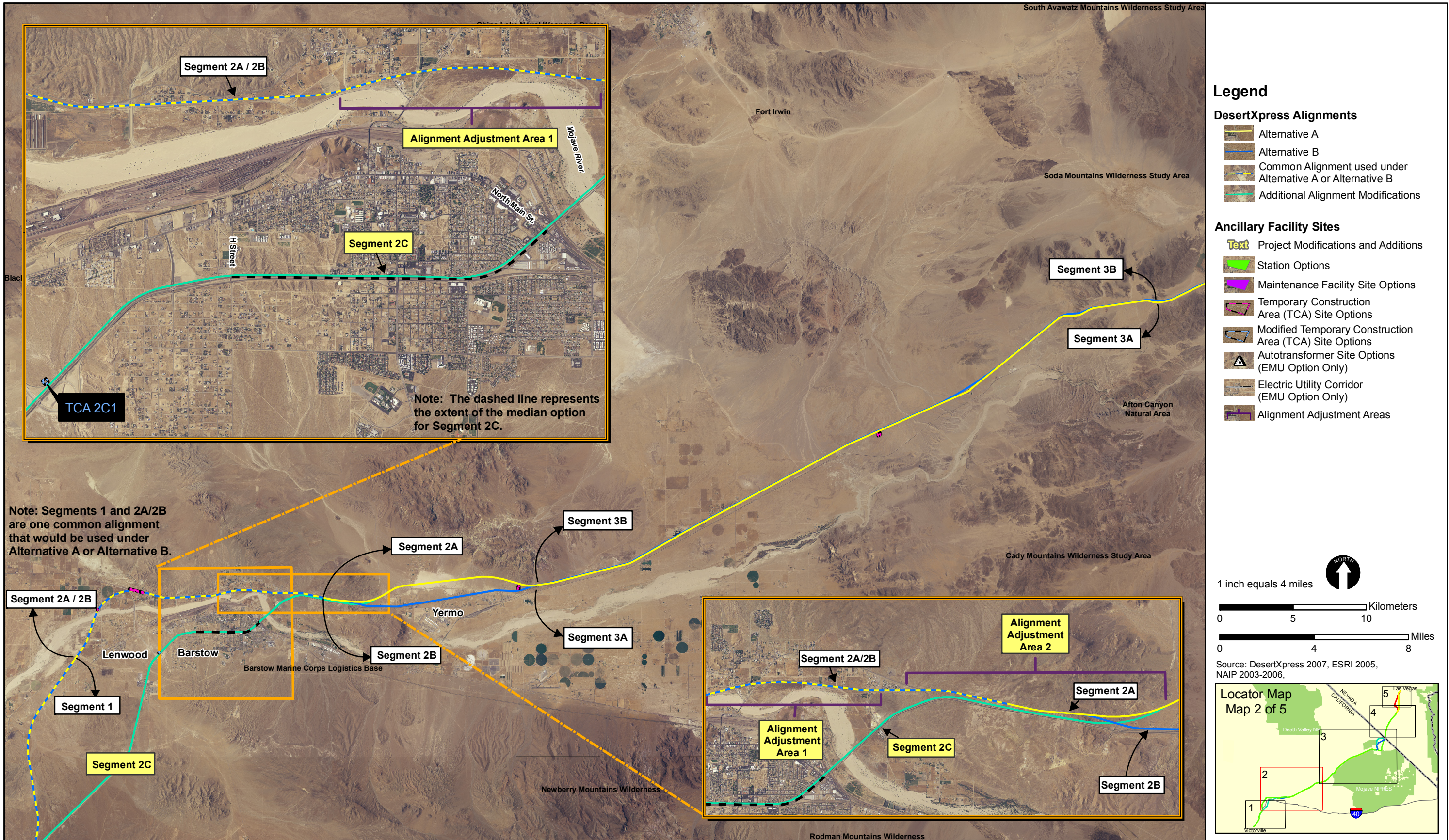
- DesertXpress Alignments**
- Alternative A
 - Alternative B
 - Common Alignment used under Alternative A or Alternative B
 - Additional Alignment Modifications

- Ancillary Facility Sites**
- Text** Project Modifications and Additions
 - Modified Station Site Option - Victorville Station Site 3A/3B
 - Station Options
 - Maintenance Facility Site Options
 - Temporary Construction Area (TCA) Site Options
 - Modified Temporary Construction Area (TCA) Site Options
 - Autotransformer Site Options (EMU Option Only)
 - Electric Utility Corridor (EMU Option Only)
 - Alignment Adjustment Areas



Source: DesertXpress 2007, ESRI 2005, NAIP 2003-2006.





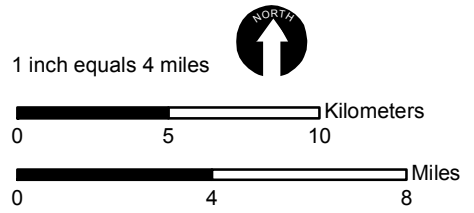
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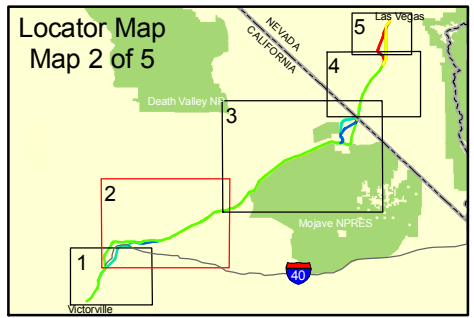
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 - Electric Utility Corridor (EMU Option Only)
 - Alignment Adjustment Areas

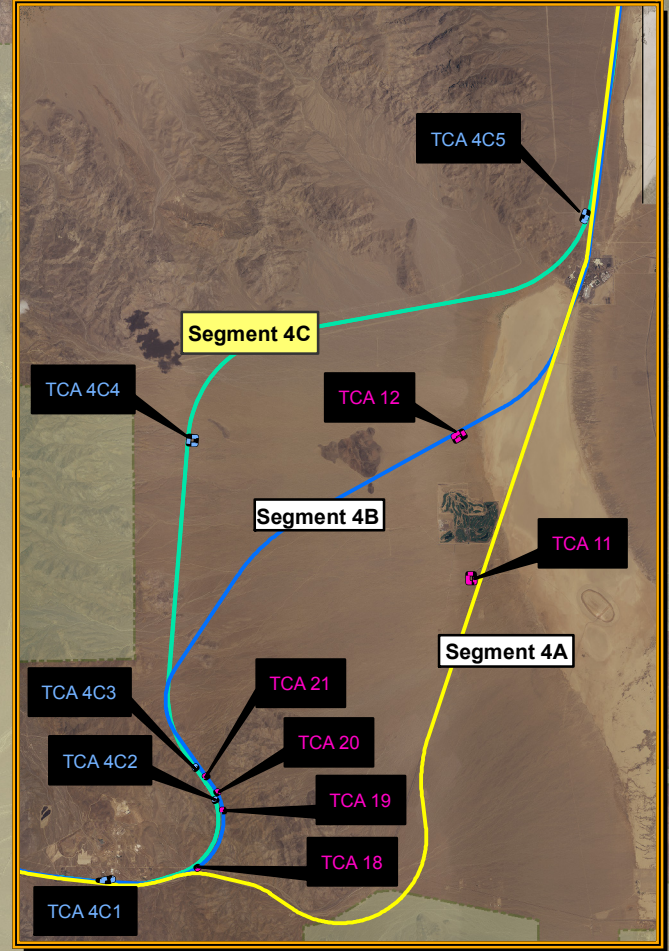
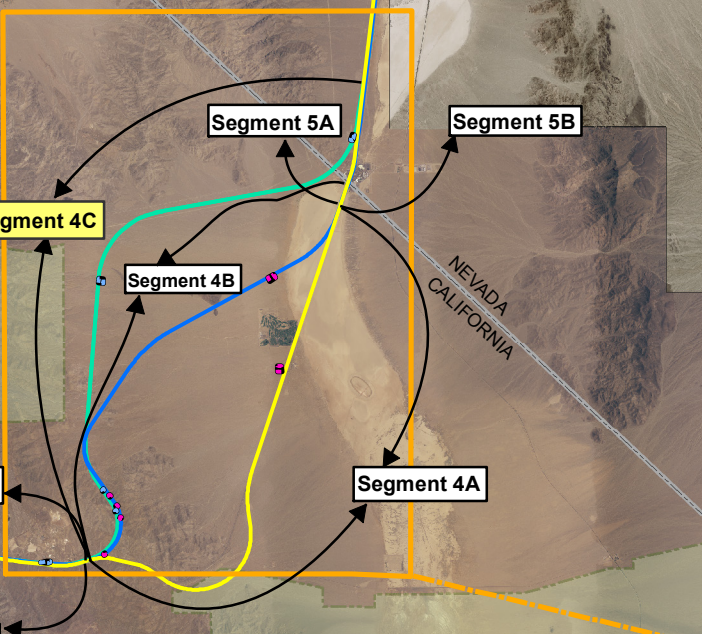
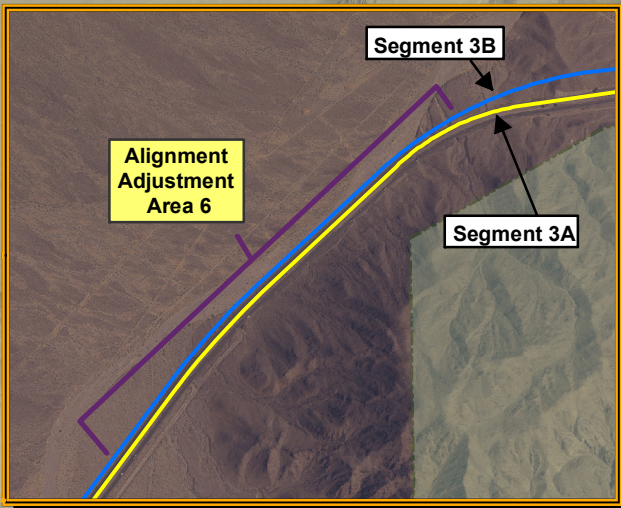
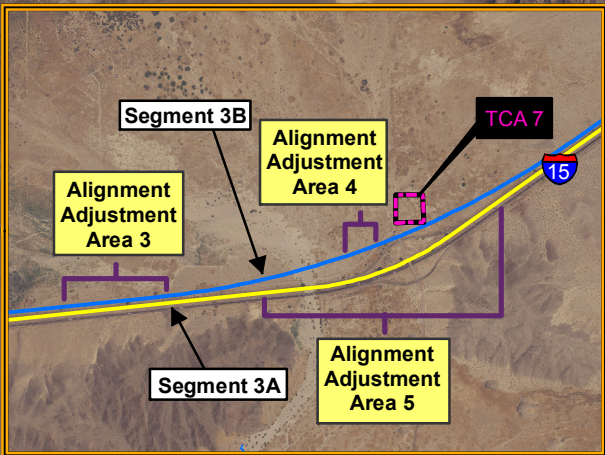
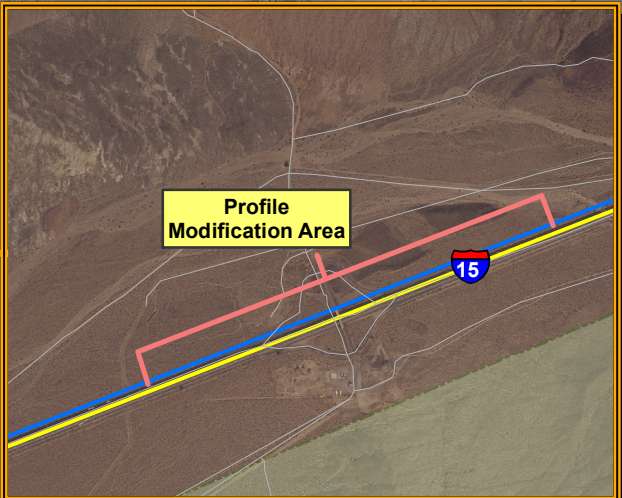
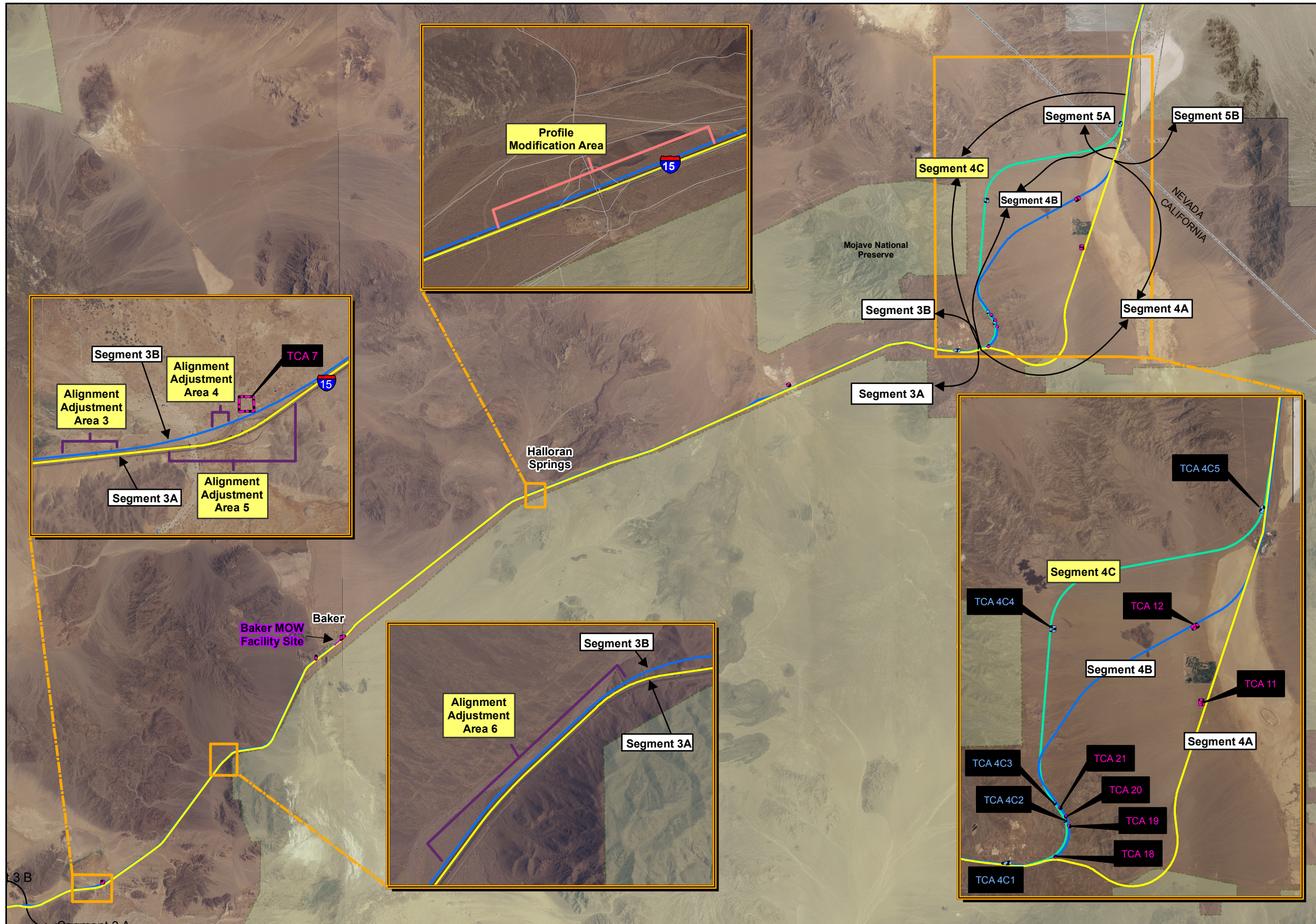
Note: Segments 1 and 2A/2B are one common alignment that would be used under Alternative A or Alternative B.

Note: The dashed line represents the extent of the median option for Segment 2C.



Source: DesertXpress 2007, ESRI 2005, NAIP 2003-2006,



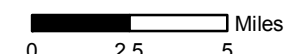
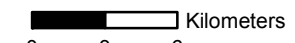


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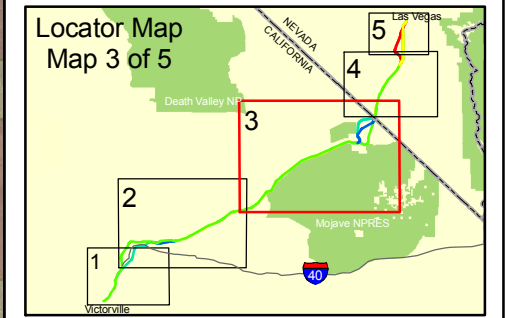
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- Alternative A
 - Alternative B
 - Common Alignment used under Alternative A or Alternative B
 - Additional Alignment Modifications

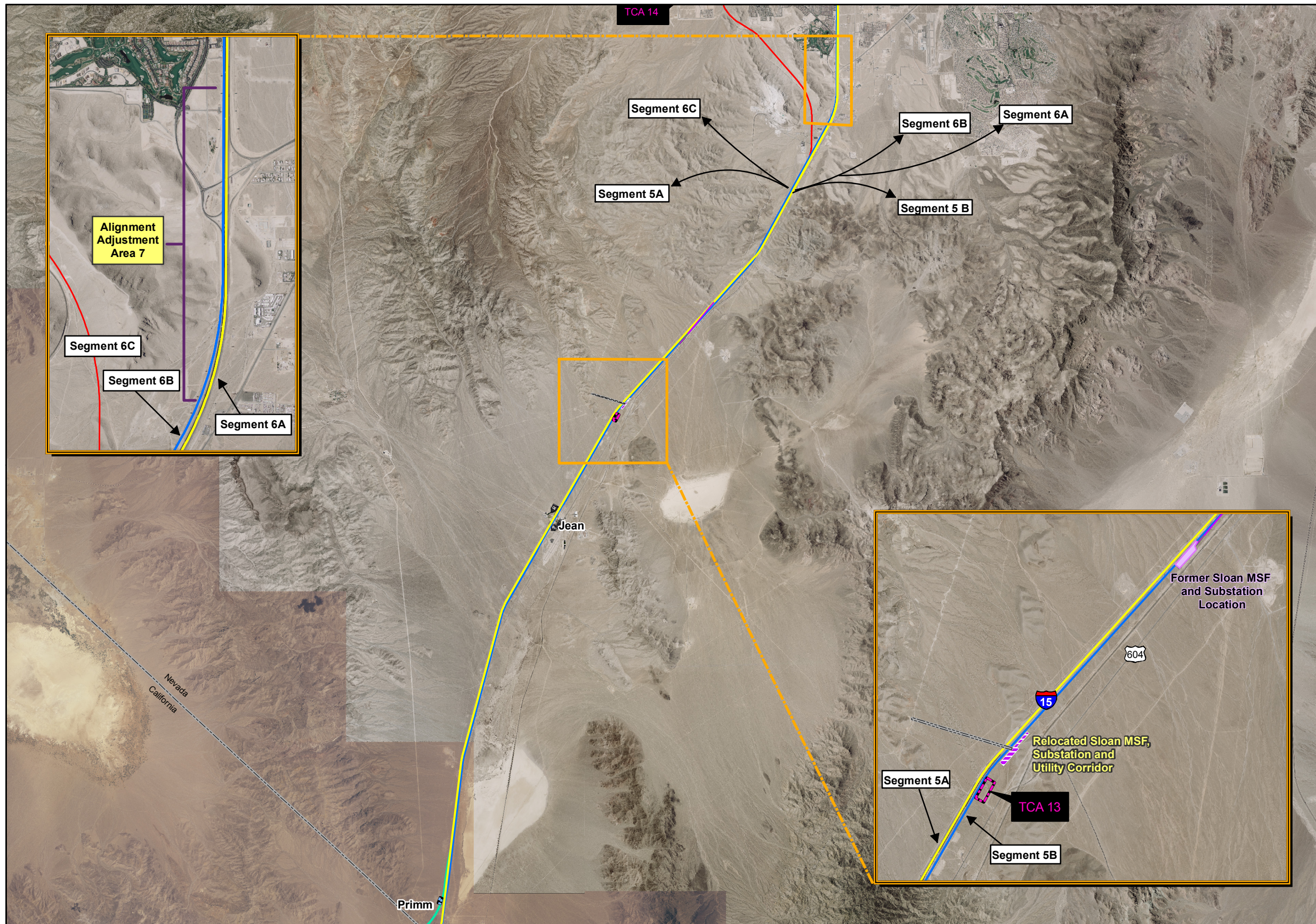
- Ancillary Facility Sites**
- Project Modifications and Additions
 - Station Options
 - Maintenance Facility Site Options
 - Temporary Construction Area (TCA) Site Options
 - Modified Temporary Construction Area (TCA) Site Options
 - Autotransformer Site Options (EMU Option Only)
 - Electric Utility Corridor (EMU Option Only)
 - Alignment Adjustment Areas

1 inch equals 5 miles



Source: CirclePoint 2008, ESRI 2005, DesertXpress 2007, NAIP and DOQQ Imagery





Legend

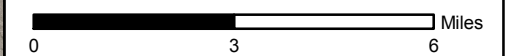
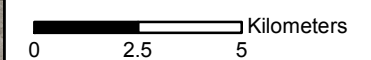
DesertXpress Alignments

- Alternative A
- Alternative B
- Common Alignment used under Alternative A or Alternative B
- Additional Alignment Modifications

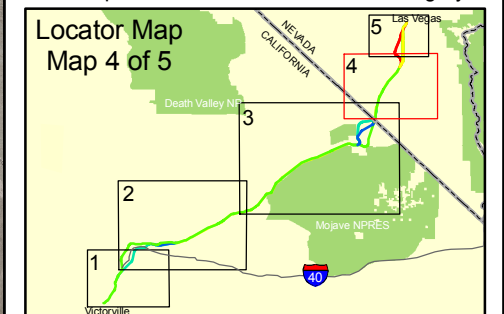
Ancillary Facility Sites

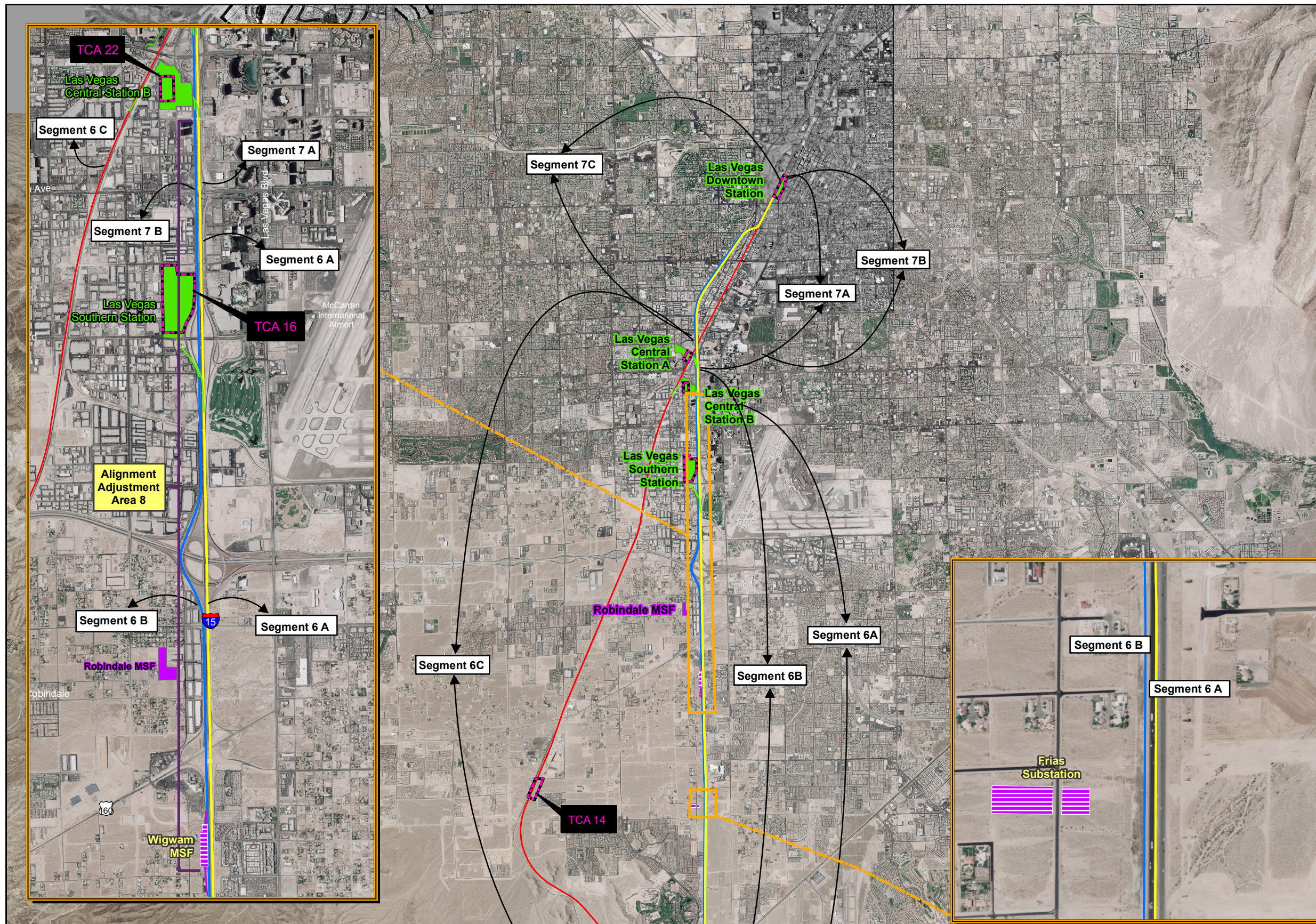
- Project Modifications and Additions
- Station Options
- Maintenance Facility Site Options
- Relocation Sloan MSF / Substation Site Option
- Temporary Construction Area (TCA) Site Options
- Modified Temporary Construction Area (TCA) Site Options
- Autotransformer Site Options (EMU Option Only)
- Electric Utility Corridor (EMU Option Only)
- Alignment Adjustment Areas

1 inch equals 3 miles



Source: CirclePoint 2008, ESRI 2005, DesertXpress 2007, NAIP and DOQQ Imagery





Legend

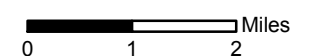
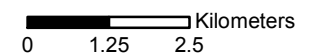
DesertXpress Alignments

- Alternative A
- Alternative B
- Common Alignment used under Alternative A or Alternative B
- Additional Alignment Modifications

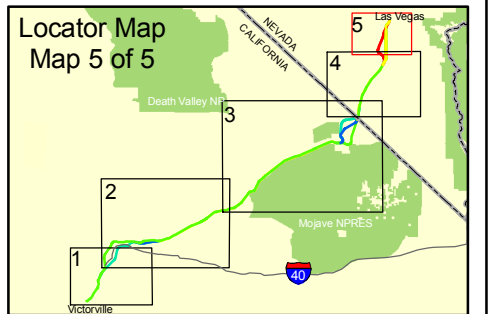
Ancillary Facility Sites

- Station Options
- Maintenance Facility Site Options
- Frias Substation and Wigwam MSF Modifications
- Temporary Construction Area (TCA) Site Options
- Modified Temporary Construction Area (TCA) Site Options
- Autotransformer Site Options (EMU Option Only)
- Electric Utility Corridor (EMU Option Only)
- Alignment Adjustment Areas

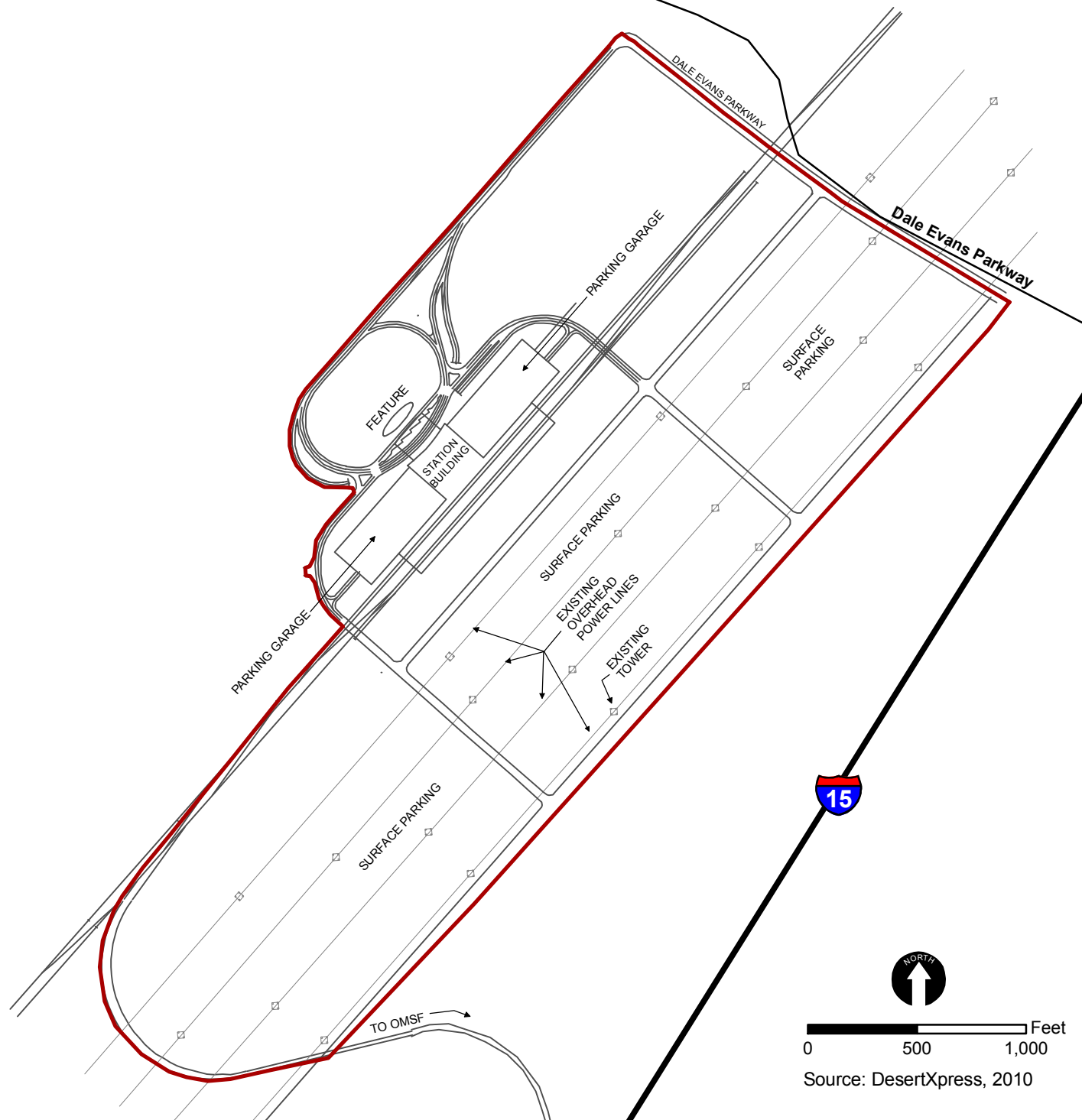
1 inch equals 2 miles



Source: CirclePoint 2008, ESRI 2005, DesertXpress 2007, NAIP and DOQQ Imagery



Victorville Station Site 3A



Victorville Station Site 3B

