Legend

Project Boundary

Historical Wetlands and Streams

- Dune
- Salt/Unvegetated Flat
- Ocean
- Beach
- Open Water
- River Island/Bar
- Vegetated Wetland
- Vegetated, Woody
- Subtidal Water
- River/Stream
- Vegetated, Upland
- Gully
- Intertidal Flat

http://www.caltsheets.org/socal/

N

0 750 1,500 3,000
Feet

1 inch = 1,500 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: November 15, 2016

UPPER LCW WETLANDS MITGATION BANK

Southern California Coast T-Sheets (1851-1889)

GLENN LUKOS ASSOCIATES

Exhibit 6A

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 6ATSheet.mxd

Legend

Project Boundary

Historical Wetlands and Streams

- Intertidal Flat
- Open Water
- Subtidal Water
- Vegetated Wetland

http://www.caltsheets.org/socal/

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: November 15, 2016

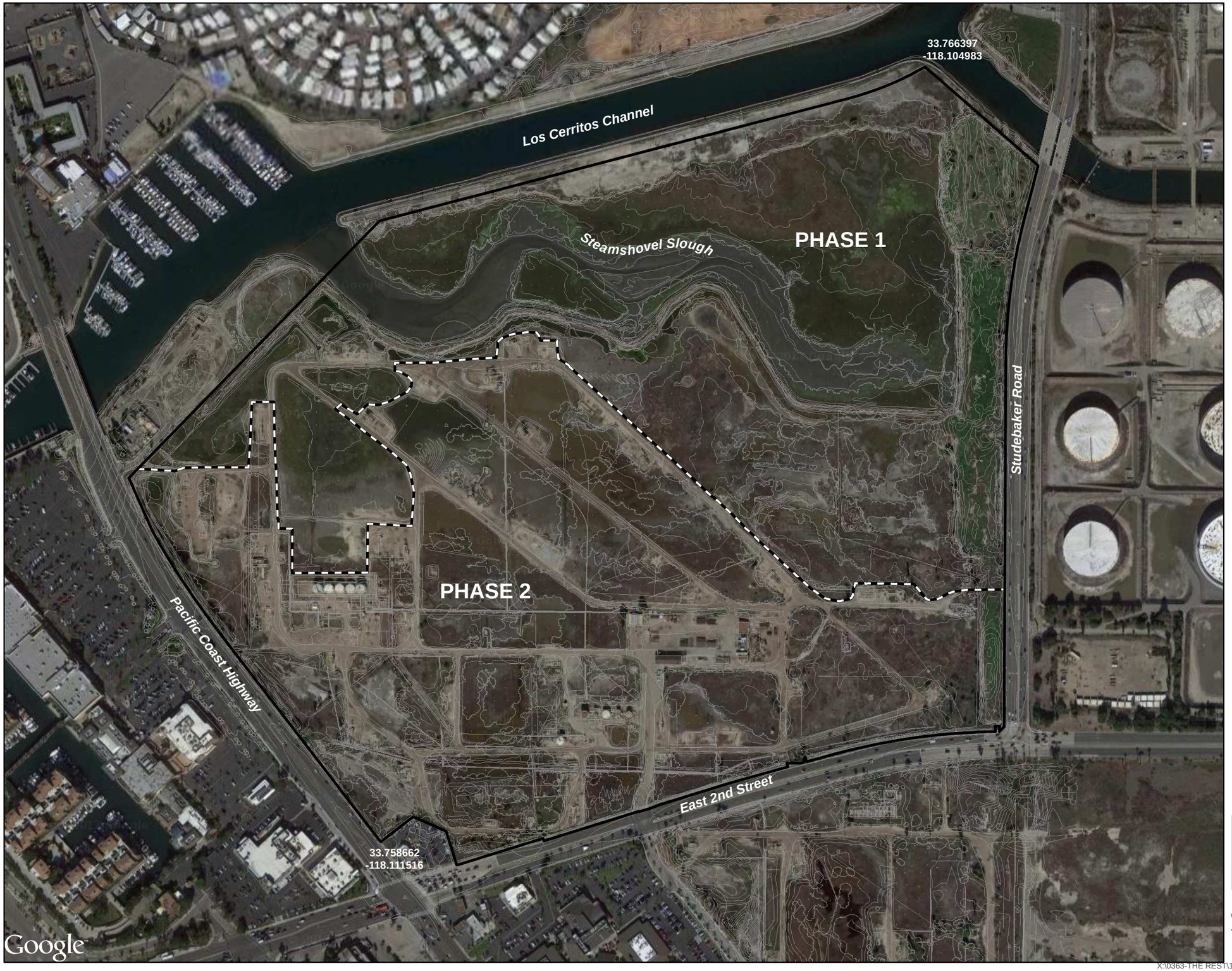
UPPER LCW WETLANDS MITGATION BANK

Southern California Coast T-Sheets (1851-1889)

GLENN LUKOS ASSOCIATES

Exhibit 6A

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 6BTSheet.mxd



Legend

Project Boundary

Synergy Oil Field Phase Boundaries

N

0 175 350 700

Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: February 28, 2017

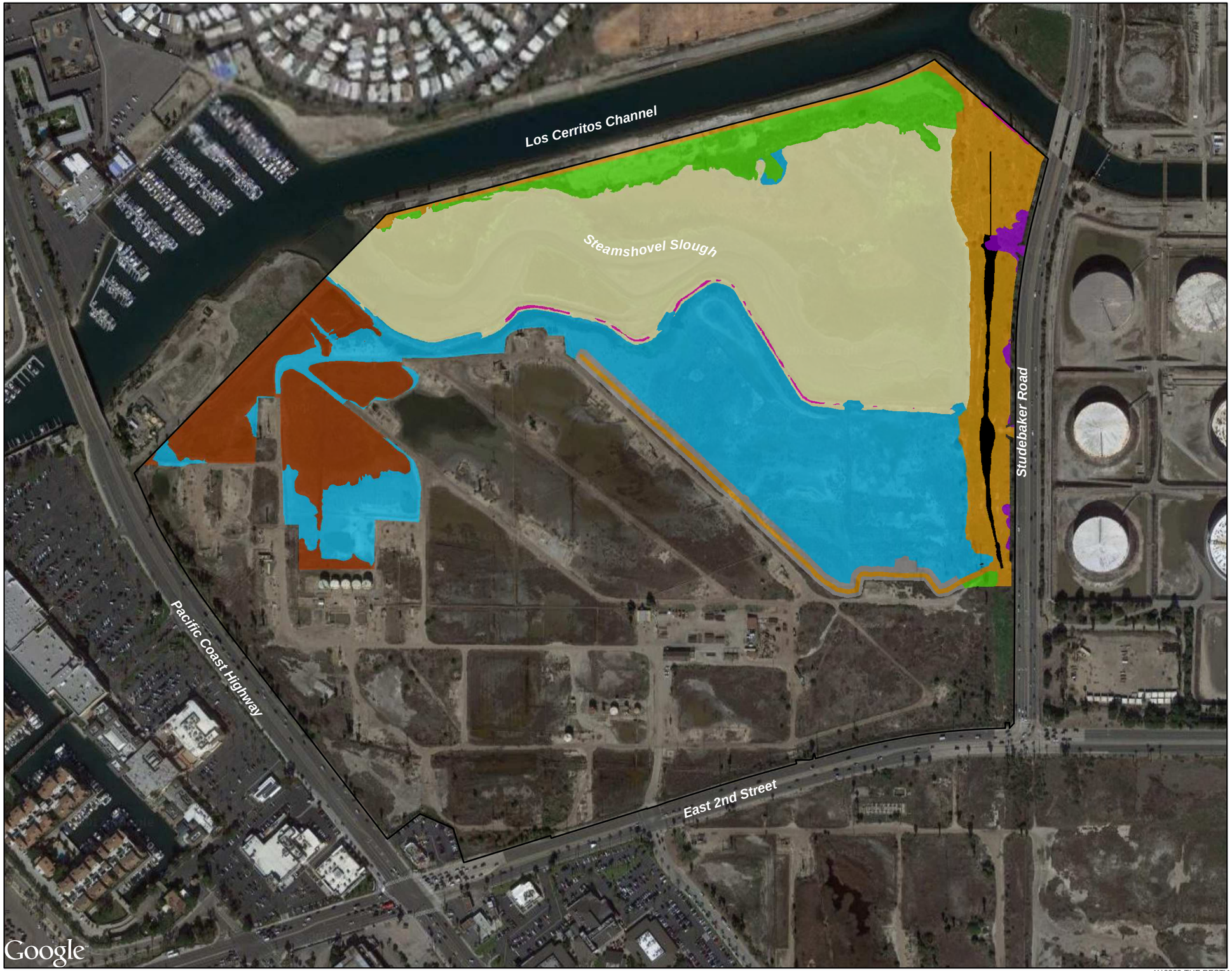
UPPER LCW WETLANDS MITIGATION BANK

Current Aerial (2015)

GLENN LUKOS ASSOCIATES

Exhibit 6C

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 6CCurrentCondition.mxd



Legend

- Project Boundary
- Trail
- Tidal Marsh Re-establishment
- Transitional Wetland Re-establishment
- Transitional 2 Re-establishment
- Tidal Marsh Rehabilitation
- Upland Buffer Establishment
- Steamshovel Slough Enhancement
- Transitional 2 Enhancement
- Upland Buffer Enhancement

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: November 15, 2016

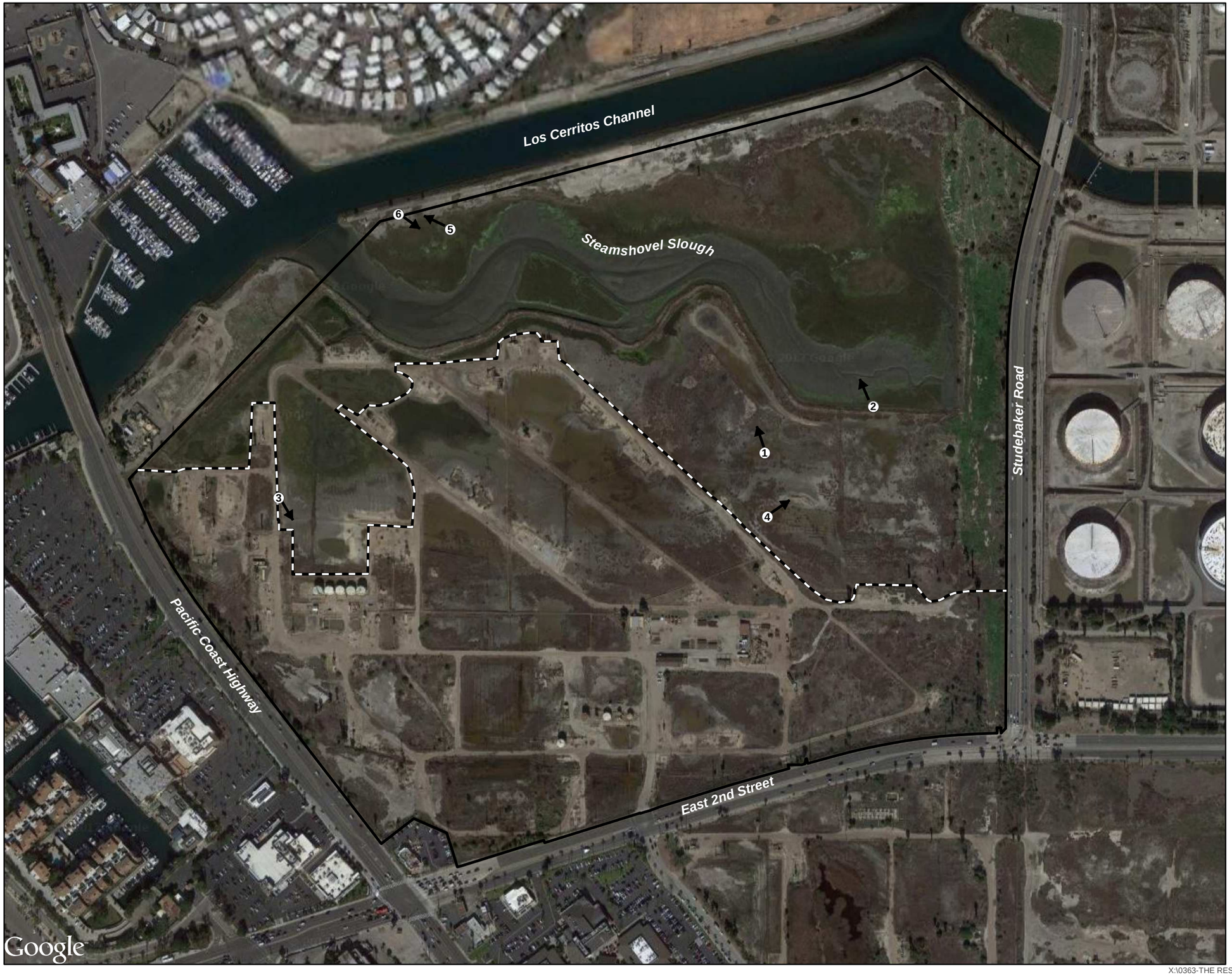
UPPER LCW WETLANDS MITIGATION BANK

Synergy Oil Field - Proposed Restoration

GLENN LUKOS ASSOCIATES

Exhibit 7

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 7ProposedRestoration.mxd



Legend

- Project Boundary
- Synergy Site Phasing Boundary
- Photo Location

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: February 28, 2017

UPPER LCW WETLANDS MITIGATION BANK

Photo Location Map

GLENN LUKOS ASSOCIATES

Exhibit 8A

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 8APhotoLocation.mxd

Legend

Project Boundary

CRAM Assessment Area

N

0 175 350 700

Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: February 28, 2017

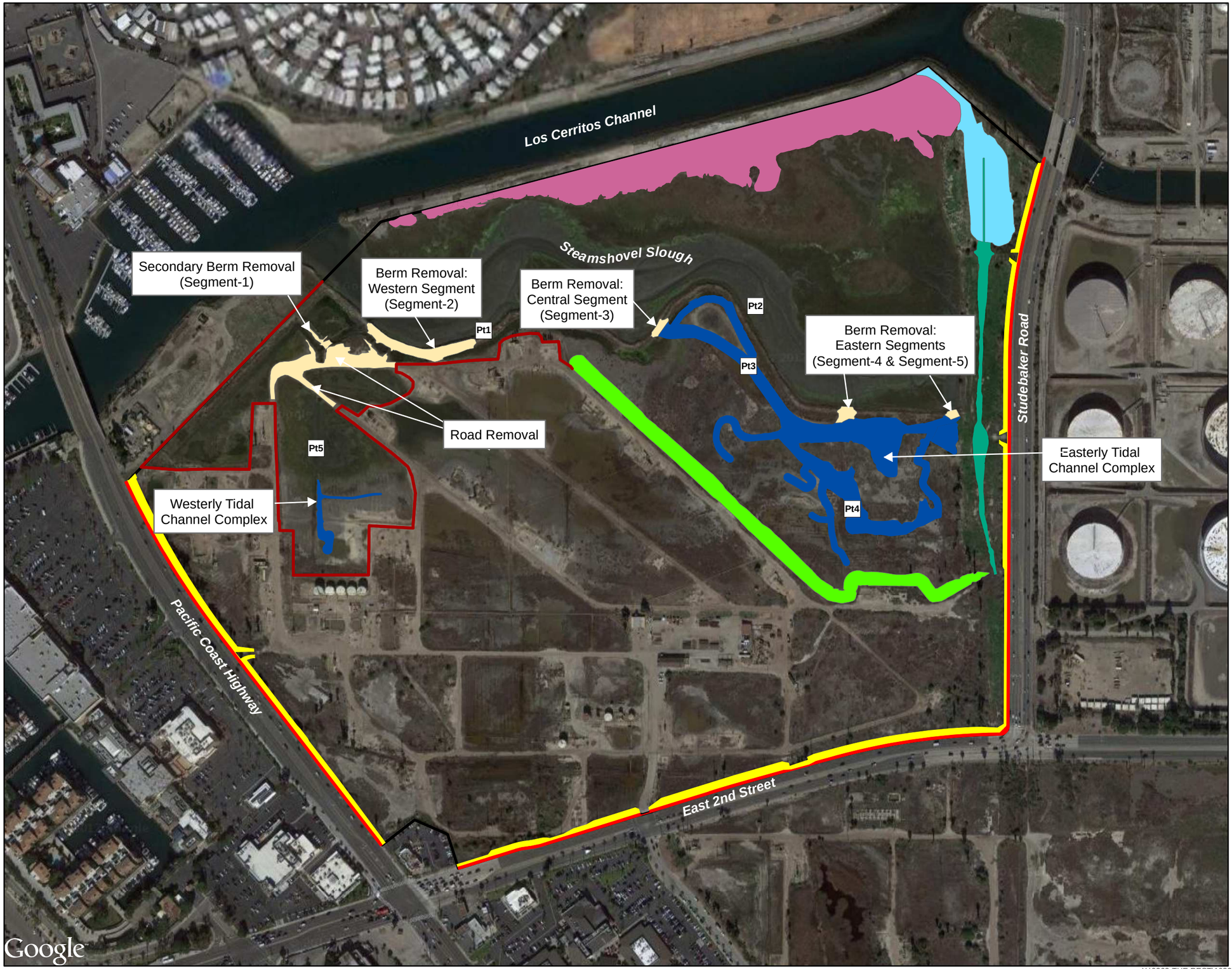
UPPER LCW WETLANDS MITIGATION BANK

Synergy Oil Field – Assessment Area

GLENN LUKOS ASSOCIATES

Exhibit 9

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 9CRAMAA.mxd



Legend

- Project Boundary
- Berm/Road Removal
- Overlook Terrace Fill
- Seawall Berm
- Sheetpile Wall
- Sidewalk - Permanent
- Sidewalk - Temporary
- Tidal Channel Grading
- Trail
- Transitional Wetland Grading
- Hydraulic Modeling Points

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: February 28, 2017

UPPER LCW WETLANDS MITIGATION BANK

Synergy Oil Field - Restoration Work Plan

GLENN LUKOS ASSOCIATES

Exhibit 10A

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 10A RestorationWorkplan.mxd

Legend

- Project Boundary
- Impact Footprint
- Oil Tank Farms to be Removed
- 95% Aboveground/Obsolete Pipes to be Removed
- Oil Wells to be Abandoned
- Invasive Fan Palm to be Removed

N

0 175 350 700
Feet

1 inch = 350 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: February 28, 2017

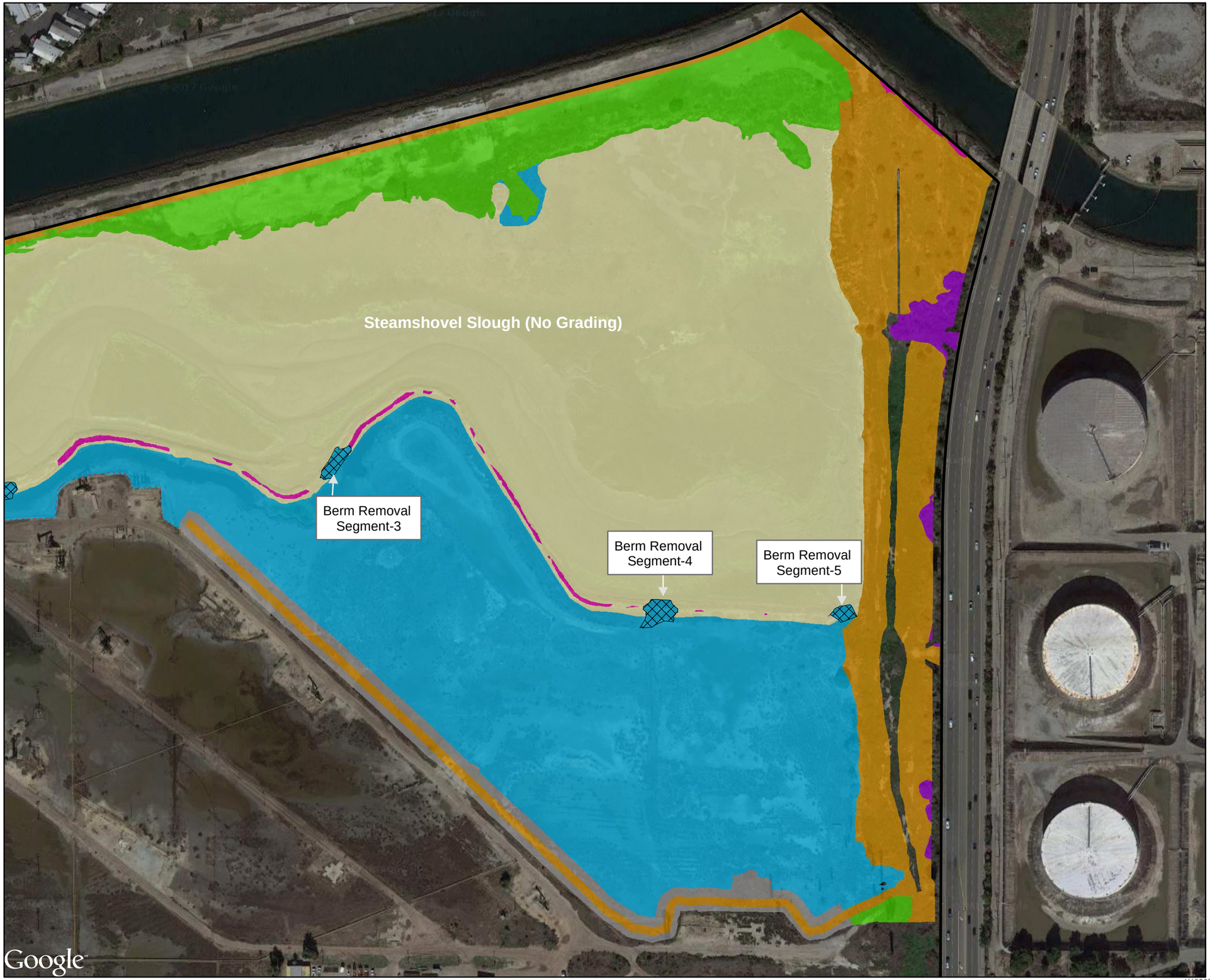
UPPER LCW WETLANDS MITIGATION BANK

Grading Plan

GLENN LUKOS ASSOCIATES

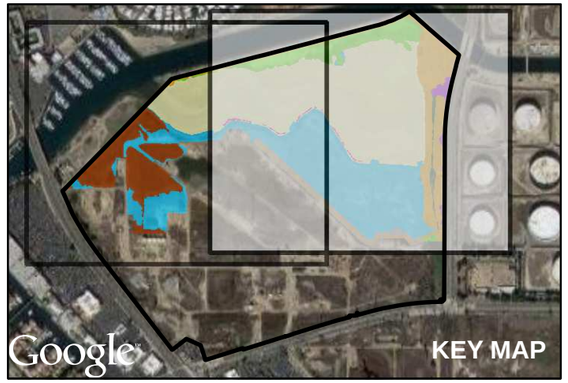
Exhibit 10B

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 10BGradingPlan.mxd



Legend

- Project Boundary
- Berm/Road Removal
- Sheetpile Wall
- Tidal Marsh Re-establishment
- Transitional Wetland Re-establishment
- Transitional 2 Re-establishment
- Tidal Marsh Rehabilitation
- Upland Buffer Establishment
- Steamshovel Slough Enhancement
- Transitional 2 Enhancement
- Upland Buffer Enhancement



N

0 100 200 400

Feet

1 inch = 200 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: February 28, 2017

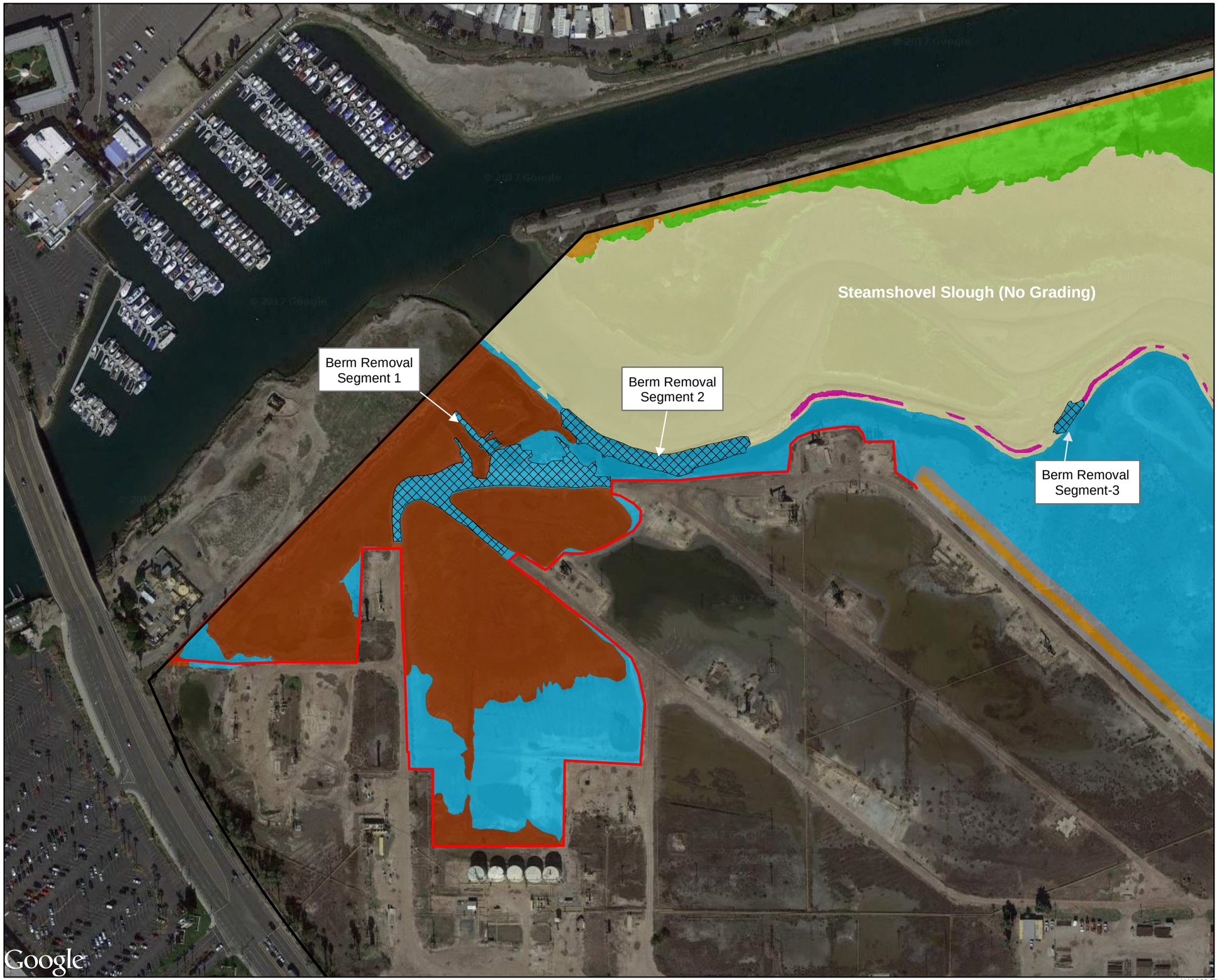
UPPER LCW WETLANDS MITIGATION BANK

Synergy Oil Field - Proposed Restoration

GLENN LUKOS ASSOCIATES

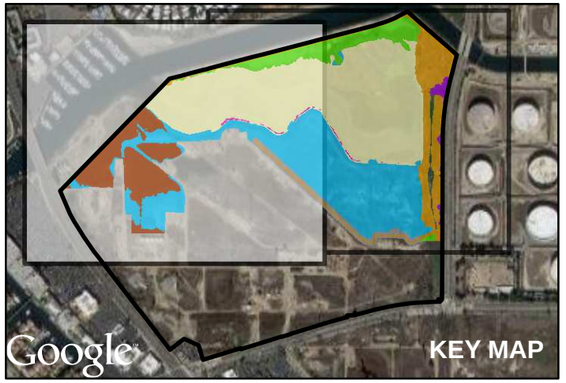
Exhibit 11A

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 11ADetails.mxd



Legend

- Project Boundary
- Berm/Road Removal
- Sheetpile Wall
- Tidal Marsh Re-establishment
- Transitional Wetland Re-establishment
- Transitional 2 Re-establishment
- Tidal Marsh Rehabilitation
- Upland Buffer Establishment
- Steamshovel Slough Enhancement
- Transitional 2 Enhancement
- Upland Buffer Enhancement



N

0 100 200 400
Feet

1 inch = 200 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: November 15, 2016

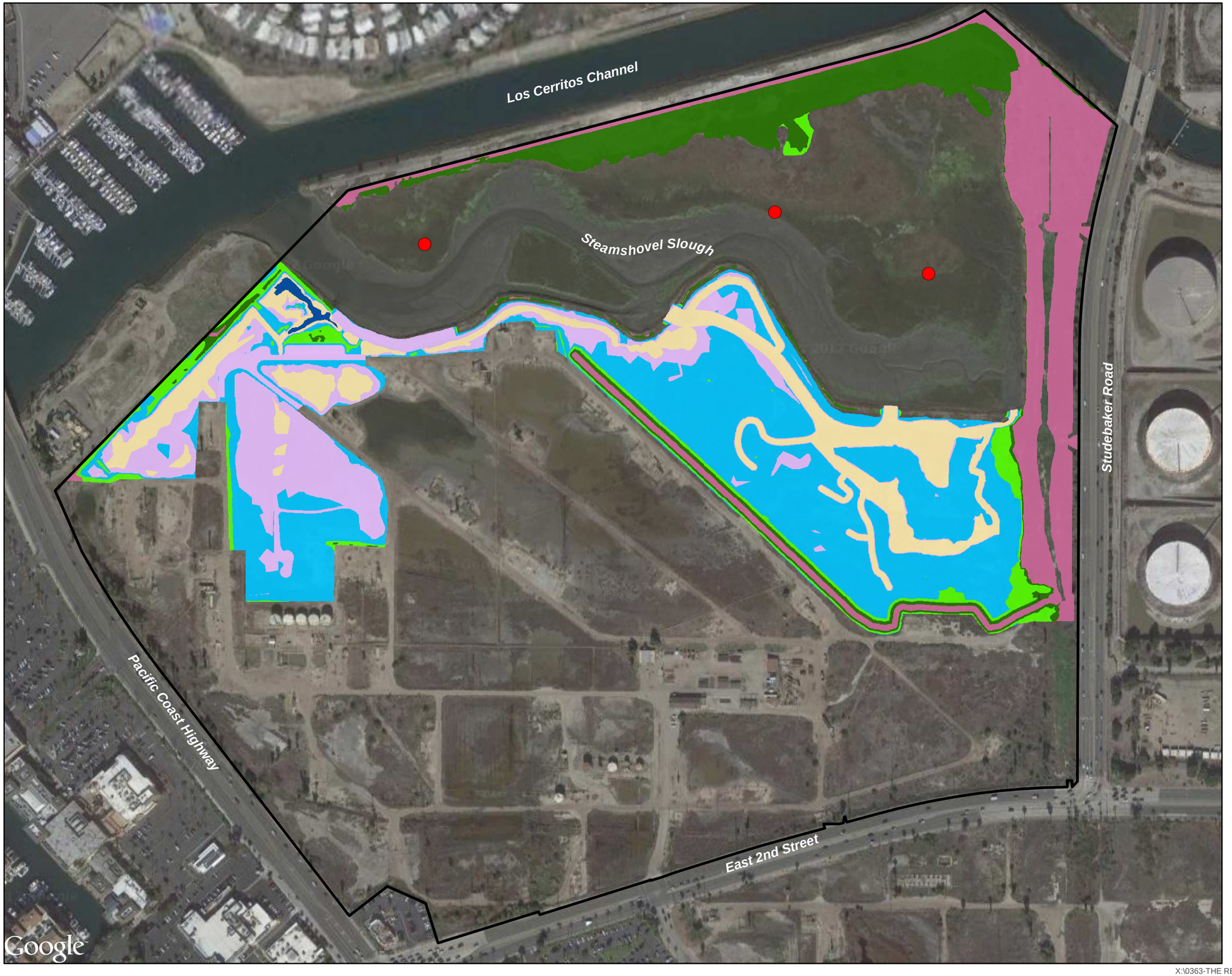
UPPER LCW WETLANDS MITIGATION BANK

Synergy Oil Field - Proposed Restoration

GLENN LUKOS ASSOCIATES

Exhibit 11B

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 11BDetailsB.mxd



Project Boundary
Mud Flats
High Marsh
Subtidal
Low Marsh
Transitional
Mid Marsh
Upland
Conceptual Reference Location

Low Marsh (+0.8 feet to +1.5 feet NGVD)	
Botanic name	**Common name**
Batis maritima	saltwort
Spartina foliosa	California cordgrass
Mid Marsh (+1.5 feet to +3.4 feet NGVD)	
Batis maritima	saltwort
Cuscuta salina	saltmarsh dodder
Distichlis spicata	saltgrass
Frankenia salina	alkali heath
Jaumea carnosa	fleshy jaumea
Limonium californicum	saltmarsh rosemary
Salicornia bigelovii	Bigelow's pickleweed
Salicornia pacifica	pacific pickleweed
Suaeda calceoliformis	Pursh's seablite
Suaeda esteroa	estuary seablite
Triglocin concinna	round-leaved arrow grass
High Marsh (+3.4 feet to +4.1 feet NGVD)	
Arthrocnemum subterminale	Parish's glasswort
Atriplex watsonii	Watson's atriplex
Centromadia parryi australis	Southern tarplant
Distichis littoralis	shoregrass
Distichlis spicata	saltgrass
Lasthenia glabrata coulteri	Coulter's goldfields
Suaeda esteroa	estuary seablite
Suaeda taxifolia	wooly seablite
Transitional Marsh (+4.1 feet to +6.1 feet NGVD)	
Arthrocnemum subterminale	Parish's glasswort
Centromadia parryi australis	Southern tarplant
Cressa truxillensis	alkali weed
Distichis littoralis	shoregrass
Distichlis spicata	saltgrass
Heliotropium curassavicum	saltmarsh heliotrope
Lycium californicum	California boxthorn
Spergularia marina	saltmarsh sand Spurrey
Suaeda taxifolia	wooly seablite

0 150 300 600
Feet
N

1 inch = 300 feet

Coordinate System: State Plane 5 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: K. Kartunen, GLA
Date Prepared: November 15, 2016

UPPER LCW WETLANDS MITIGATION BANK

Synergy Oil Field - Planting Plan

GLENN LUKOS ASSOCIATES

Exhibit 12

X:\0363-THE REST\1032-02MITI\Report_RestorationPlan\February 2017\Exhibit 12PlantingMap.mxd